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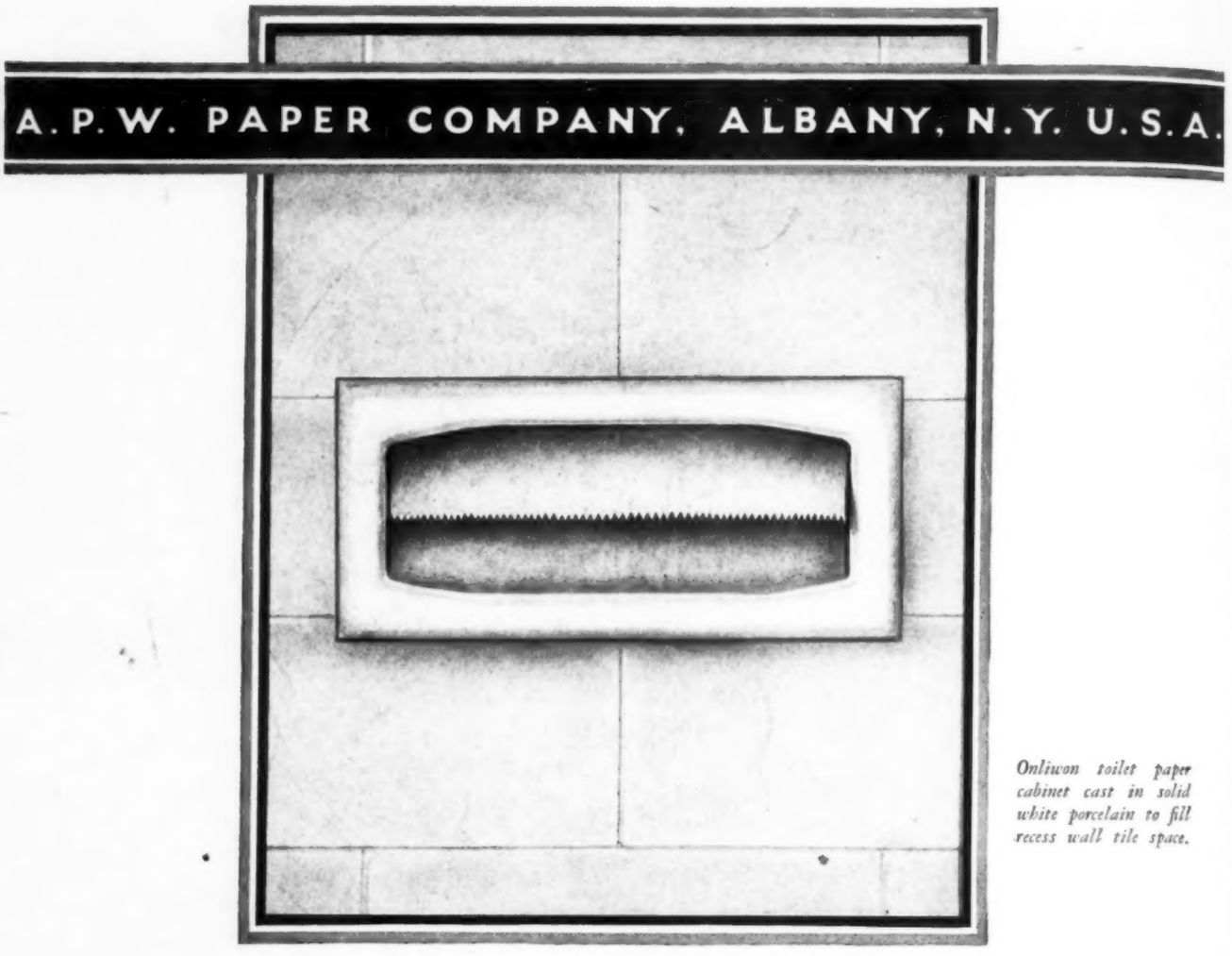

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THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment and Administration of Hospitals, Sanatoriums and Allied Institutions, and to Their Medical, Surgical and Nursing Services

Vol. XXX *March 1928* No. 3

How Shall We Measure Construction Costs?

By CARL A. ERIKSON

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A DISCUSSION of costs is always pertinent. Whether it be the cost of shoes or of shelter will depend on those discussing the subject. If it be an architect with a hospital "job," or a building committee trying to determine whether to cut the garment to suit the cloth or to obtain more cloth—a discussion of hospital building costs may be welcome. One of the great difficulties in such a discussion is to find a basis for comparison.

If it were only necessary to consider the elements of the structure—the brick, sand, cement and steel—it would be quite simple. To this fluctuating but yet readily comparable quantity, however, must be added an uncertain element, the hourly wages of labor, both skilled and unskilled, and the quantity produced per dollar of wages paid. To make the question still more difficult, it is necessary to compare the efficiency and skill of various contractors. Every one has heard unsuccessful bidders claim that the successful one "must be losing money for he is doing the work below cost." And yet the successful contractor is often quite happy when he surveys the profits upon completion of the contract.

To add to the confusion it is necessary to compare costs of complete buildings, not merely the cost of a thousand bricks laid in the wall. Assuming that by some strange combination of circumstances it were possible to build identical hospital buildings all over the country, comparisons of costs then would be a measure of the relative costs of labor, material and contractors' profits. But no two hospital buildings are identical and therefore the costs of entirely different structures must be compared.

To compare structures that are unlike in size, subdivision, detail and finish, some unit of comparison, a highest common divisor must be found. The patient's bed is a divisor, often used but seldom found of value. To compare costs per bed, one must compare simultaneously not only all the facts of finish or quality, but a score of facts about width, size of wards and baths; the liberality of the therapeutic, diagnostic, dietary, administrative and other departments; the provisions for future expansion and many other facts.

One hospital is planned liberally and another in niggardly fashion; comparison of the two will naturally indicate the niggardly one to be the lower cost per bed, and yet it may not be the best community investment.

Cost per bed may be likened to the cost of two six-roomed houses. One may cost $6,000 and another $60,000. Both are of masonry, one of stone, the other of common brick. One has a living room, 30 by 60 feet, with a 25 foot ceiling; the other has a living room 12 by 15 feet with an 8 foot 6 inch ceiling. One has a garage, sun parlor and terrace; the other has none of these. One has stove heat; the other, hot water with oil burners. One has the best of cabinet finish; the other, poorly finished mill work. The six-room house at $6,000 may be a "lemon" and the one at $60,000 a bargain.

Just so with hospitals. The cost per bed in a

ward pavilion at Cook County Hospital cannot be compared with the cost per bed in the new private patients' building at Michael Reese Hospital, both in Chicago. Nor can either be compared with the forty-five bed general hospital at Ponca City, Okla., or the 200-bed one at St. Cloud, Minn.

But the architects must have a measure of comparison, a highest common divisor, for they must estimate the cost of a building long before drawings are sufficiently advanced to permit a contractor to do so. A few architects use the total number of square feet as their guide, but many more have found the cubic contents of their buildings a much more dependable method. In measuring the costs in this way, architects remember that it is not a micrometer but rather a foot rule.

As this method of comparison is quite commonly used, some comments on the elements that affect the cost of each cubic foot contained within the building may be found of interest. In a previous article, I discussed the cost per bed; in a later one, I hope to discuss those elements in planning that increase the cubic contents and costs per bed.

But what is meant by the cubic contents of the building? This is the volume of building contained within the outer walls from the top of the basement floor to the average height of the roofs. Open porches may be considered as half in and half out, and are figured that way; the enclosed porches are entirely in. Cornices, parapets and similar projections are not included. Terraces on fill should be figured separately. If space below a terrace is used, it should be figured solid. Pent houses are included as are trenches of any size; the contents of an isolated smoke stack are usually ignored.

What Do Costs Comprise?

And what are the costs? These include the total costs of all materials and labor to complete the building. In cases where materials, labor and profits are donated, either in whole or part, these should be included at a fair price. Completion of the building so that it is ready for the equipment includes the installation of hardware, lighting fixtures, screens, floor coverings, when glued to the floor, sterilizers, kitchen equipment, laundry machinery, in fact, all materials permanently attached to the building.

Because one hospital costs fifty cents per cubic foot, and another eighty-five cents per cubic foot, it does not follow that the fifty cent building is the better purchase. The reverse may be the truth. It is obvious that the buildings compared must be similar in area, height, subdivision of space, equipment and finish. They must also be contracted for at the same time in the same place in order to make any useful comparisons, and no such duplication has ever arisen.

The factors that affect the cost of this hypothetical cubic foot of hospital buildings are both tangible and intangible. As discussion of the intangible is rather fruitless and usually beyond the control of the building committee and the architects, it will be avoided.

Factors That Affect Costs

First, there are world economic conditions and their effect on the cost of labor and material. There are still some hopeful individuals who are awaiting lower prices. They always predict lower prices in the offing and when they come, as in 1914 and 1921, these persons lack either the courage or the resourcefulness to proceed with the badly needed building. They usually build at the "top of the market" but some of them will be waiting at the millennium for lower prices.

Second, local building and business conditions obviously affect costs. In many smaller cities the construction of one large building will absorb all of the readily available local mechanics and, if other business is active, the common labor as well. Unless the community is so located that a further supply of skilled and unskilled labor may be drawn from near-by towns, the cost of the buildings invariably increases. Materials are not so readily affected by the community demands, for in the present era but few of the materials are produced locally. These are the bulky materials, such as sand, gravel and brick or clay tile.

Third, assurances that the architect's certificate will be promptly paid by having the building funds in hand; that neither the architect nor the owner are unreasonable in their interpretation of the contract documents; that both plans and specifications are so complete and clear that no guess work is necessary, are all elements that the contractor considers when making his bid.

Fourth, it must be remembered that letting a contract is usually something of an auction sale reversed, for the "work" is sold to the lowest bidder. In preparing his bid, the contractor takes off the quantities of materials exactly and, barring errors, it is about the only thing that is exact about an estimate. With these quantities before him, he estimates the labor necessary for fabrication, erection or installation, from his previous experience.

It is to be remembered that no two buildings are identical and that much of the contract is to be performed from eight to eighteen months after the estimate is prepared. To the total cost of materials and labor, the contractor must add his

overhead, and this varies widely. Then the percentage of profits will vary still more. If he has plenty of profitable contracts on hand, the percentage will probably be high. If he has little, he will shave the profits closely. This may help to explain why contractors' bids prepared after careful quantities are drawn off from complete plans and specifications vary so widely.

It may also explain why a contractor's estimate based on an architect's preliminary sketches is usually so valueless. These drawings do not give sufficient information to take off the exact quantities to which he is accustomed. The contractor must, therefore, estimate quantities as well as the items of labor, etc., to which he is accustomed. The result is either that he underestimates or overestimates the cost. In one such case, the contractor offered to sign a contract at fifty-three cents per cubic foot, based on sketches and a complete description of the materials and finish. Fortunately for both the contractor and the owner the proposition was not accepted, for, when this contractor submitted his figure based on complete plans and specifications, it was nearly eighty-five cents. The contract was let for sixty-eight cents.

In another case, 1,500 miles from the first, a careful building committee submitted complete plans and specifications to a contractor for an estimate before permitting the architects to ask for bids generally. As this contractor's estimate indicated an expenditure of over 50 per cent more than the architects estimated, he threw a bomb into the committee. The architect's estimate was $340,000. The contractor's estimate was $500,000. The committee was finally persuaded to ask for definite tenders on the plans and specifications just as they were. The contracts were let for $300,000, or $40,000 under the architect's estimate, prepared without any more accurate quantities than the cubic contents and a knowledge of the cost per cubic foot of many similar buildings. The contractor submitting the preliminary $500,000 figure, submitted one of about $360,000, the top of about eight or ten contractors.

Estimating by Cubic Feet

The reliability of the cubic foot method of estimating, when based on voluminous, dependable and accurately interpreted data, is rather remarkable. To use cubic foot costs of other hospitals to assist in estimating costs, requires a detailed analysis of all the trades entering into the building—not merely the sum total. With such an analysis for ten or twenty hospitals available and an intimate knowledge of them, rather close estimates can be prepared by the architect.

The geographical location of the building is an important factor in costs, and sometimes a rational explanation of differences cannot be made. Generally speaking, it costs less to build in the small town than in the large cities, less to build in the South than in the North, in the Midlands than in the East. It costs more to build in the suburbs of a large city than in the city itself. The near-by country will probably cost more than either, if transportation is not readily available. In one such case, the cost of transporting labor from the city six miles away was over $4,000 on a $250,000 building; the additional drayage charges are unknown, but must have been equal to this, a total increase of 3½ per cent in the cost.

Accessibility to the source of the bulkier materials is also an element of importance. A hospital in Ohio was so fortunately located that sand, lime, cement, gravel, brick, clay, tile and most of the pipe could be trucked direct from the mill or quarry to the building. The economy in this single handling of material is obvious. The hospital that boasts of a railroad siding, either temporary or permanent, is very fortunate, if the cost of the siding does not exceed savings in drayage.

Only Fireproof Construction Considered

It is to be assumed that no one would consider the construction of a hospital that is not fireproof, except under stress of the direst necessity, hence all references in this article are to fireproof hospitals, or a better term is fire-resistant. It would be interesting to compare the cost of various types of fire-resistant constructions. To do so, however, seems beyond the scope of this article and perhaps a bit too technical. Suffice it is to say that there may be a 5 to 10 per cent difference in the cost due to the method employed.

The character of the soil on the site is a factor in the costs, especially with the higher buildings. Obviously, if it is a thick bed of rock or other hard material, basements will be expensive but the foundations will be cheaper. On the other hand, if it be muck, the foundations for anything but a low building may prove to be very expensive. While the peculiarities of the underlying soil are important, the topography also has an influence on the costs. Deep excavations or large fills should be avoided. The mistake so often made of planning a building without regard to the topography is expensive. Careful study by an ingenious architect will mold the building to suit the site, which almost invariably results in a better plan and a less expensive one.

The size of the building affects the cost, more especially so if it is not close to a supply of labor. The smaller the building the greater must be the

CONTRACT	COSTS PER CUBIC FOOT IN CENTS						
ARCHITECTURAL	No.1	No.2	No.3	No.4	No.5	No.6	No.7
MASONRY	22.7	20.37	19.98	24.3	20.8		
CUT STONE	1.5	1.66		.82	3.05		
MISC. IRON & STEEL	2.03	1.47	1.67	2.2	.13		
ORN. IRON				1.46	2.02		
ELEV ENT.				.66			
H.M. DOORS	1.0	.76	2.39	.52	1.97		
STEEL FRAME							
H.M WINDOW	.2		1.12		1.51		
ROOF & SHEET M.				1.06			
CARPENTRY	6.6	4.96	4.	5.24	4.92		
HARDWARE							
LATH & PLAST.	3.	5.92	4.66	3.3	4.72		
SOUND AB. MAT.	.1		1.32	NONE			
PAINTING	1.5	1.37	1.26	1.15	1.89		
GLASS	.5	.37	.40	.38	.72		
MARBLE	.8	.97	.31	.31	.82		
TILE	.7	.3	.03		2.44		
RUBBER TILE	.6			4.6	.59		
TERRAZZO	2.5	3.99	3.65		3.48		
CASES	.5	.10		1.14	1.62		
REFRIG		.56	.41	.42	.08		
SCREENS	.4	.4	.4	.37	.36		
SHADES							
WEATHER STG	.1	.12	.1	.08	.18		
LIGHT FIXTURE	.5	.61	.58	.06	.82		
TOTAL	45.2	44.29	42.28	48.07	52.12		
MECHANICAL							
PLUMBING		5.42	6.64	5.21	5.47		
HEATING	10.9	4.2	6.32	6.21	6.2		
VENTILATING			1.01	1.15	1.56		
WIRING	1.7	1.85	1.87	2.67	4.22		
ELEVATOR	1.3	1.52	1.45	2.54	1.13		
DUMBWAITER			.30		.22		
REFRIG. MACH.	.7	.8	1.3	1.14	1.12		
INCINERATOR			.29	.15	.18		
ASH ELEVATOR			.14				
TOTAL	14.6	13.79	19.32	19.07	20.1		
EQUIPMENT							
STERILIZERS	.5		.48		1.72		
LAUNDRY MACH	.6		1.04		.74		
KITCHEN EQUIP			1.83		.88		
MISCELLANEOUS					.27		
TOTAL	1.1	4.	3.35	4.	3.61		
GRAND TOTAL	60.9	62.08	64.95	71.14	75.83		
CONTRACTS LET	1922	1924	1926	1925	1925		

effort towards uniformity and simplicity. The cost of one porcelain bath slab, about $400, increases the cost of a 400-bed hospital just $1 per bed, and the cubic foot cost, about 1/1,000 of a cent. In a ten-bed hospital addition, however, it means $40 per bed increase, and 8/10 to 3/10 of a cent increase per cubic foot. A single metal case built to suit the whims of some individual may be a considerable expense, and of little more value than a stock case at one-half to one-third the price. When the unit is quite small, special efforts must be made to reduce the special features and to arrange for uniformity so that as few trades are called into play as is possible. These remarks refer rather more aptly to the 50,000 to 100,000 cubic feet additions and buildings than to larger ones, for it is difficult to demonstrate that a hospital of 5,000,000 cubic feet will cost much less per foot than one of 1,000,000.

The number of stories will have an intimate relation to costs per cubic foot. It is so true as to be axiomatic that costs per cubic foot increase with the number of stories; a one-story building costs less than a two-story building; a ten-story less than a twenty-story building. But not in direct proportion. The height of the building determines the character of the construction, whether steel or concrete skeleton, whether skeleton or wall bearing; the kind of foundations and other matters vitally affect the cost per unit of contents.

Proportions of Building Important

The proportions of the building are important. A "fat" building is cheaper per cubic foot than a "thin" one. Whether a "fat" plan would be cheaper per bed, would then depend on whether economical use can be made of the space thus gained.

A building 100 feet square contains 10,000 square feet on a floor. It has 400 lineal feet of outside wall. But an area 100 feet square presents great difficulties in planning for hospital purposes. Forty feet to 45 feet are the usual widths of hospital buildings. But a building of 10,000 square feet area and only 40 feet wide is 250 feet long. It has 580 feet of outside wall, or 45 per cent more than the first building, and the number of windows (twice as expensive as wall, roughly speaking) usually runs in direct proportion to the number of feet of outside wall. Heating, too, is in almost direct proportion to the perimeter of the building. A 60-foot deep building will then cost less per cubic foot than a 50-foot building; a 50-foot less than a 40-foot and a 40-foot less than a 30-foot building. But the 60-foot building may be the most expensive per patient. To make this seeming paradox clear, let us assume that a 50-foot building was planned for private patients; the outside walls of each take about 3 feet, the corridor and its walls 9 feet—a total of 12 feet, leaving 38 feet for the rooms, or 19 feet each. It is generally agreed that 10 feet from center to center of partitions is the minimum for a private room. For the sake of convenience we will assume that the story height is 12 feet from floor to floor. Two rooms on each side of the corridor then will occupy a space of 50x10x12 feet, or 6,000 cubic feet. A building 40 feet wide, with the same walls and corridor, and rooms on either side 14 feet deep, will occupy a space of 40x10x12 feet or 4,800 cubic feet.

The following tabulation of these two rooms will be interesting:

Number of Rooms	50-Ft. Bldg.	40-Ft. Bldg.
Gross floor area	500 sq. ft.	400 sq. ft.
Cubic contents	6,000 cu. ft.	4,800 cu. ft.
Size of room	9′6″x19′	9′6″x14′
Square feet in room	180.5	133
Corridor	8′ wide	8′ wide
Sq. ft. of outside wall	240	240
Sq. ft. of floor construction	470	370
Sq. ft. of finished floor	441	346
Sq. ft. of tile partition	609	504
Sq. ft. of plastering and painting	780	627
Door	Identical	
Plumbing	Identical	
Heating	Slightly less	
Electric	Identical	

A rough approximation of costs indicates that the two 9′ 6″x19′ rooms cost about $170 more than the two 9′ 6″x14′ rooms. If we assume a cost of 75 cents per cubic foot for the 40-foot building, or, $3,600 for the two rooms and corridor only, and add $250 to arrive at the cost of the 19-foot rooms, they will total $3,850, or about 64 cents per cubic foot. These figures are not to be taken as indicative of actual costs; they merely illustrate the effect that the proportions of a building may have on cubic costs. It will be found in laying out a building 50 feet deep that many long and narrow spaces are created that are difficult to use properly and that tend to increase the costs still further.

As a low cost per cubic foot is of no value *per se*, if the 9′ 6″x14′ rooms fill the needs at a lower cost per bed, the additional cost of 9′ 6″x18′ 9″ is a waste of capital funds and of maintenance.

For obvious reasons the lower the story height, the greater the cost per cubic foot; the higher the story, the lower the cubic foot costs.

A recent article by R. E. Schmidt, Schmidt, Garden & Erikson, Chicago, illustrates the relationship between the two so exactly that nothing further need be said.

Here then the determining factors will be the

areas of the rooms that are under consideration.

Another factor that increases costs per bed and decreases cubic costs, is the amount of unfinished space. A large unfinished basement, being relatively inexpensive, will reduce cubic foot costs. If it is not valuable for storeroom purposes it may be an unwise increase of costs per bed. Attics and pipe spaces have a similar effect.

The minuteness of the subdivision of the space within the building affects costs greatly. In our hypothetical 40-foot building, a nine-bed ward would occupy the space taken by four private rooms. There is then a gain of five beds, and a decrease in partitions, painting, base, and probably outlets, as well as plumbing. The two groups would compare as follows:

	Ward Unit	Private Rooms
Number of beds	9	4
Gross floor area	800 sq. ft.	800 sq. ft.
Gross contents	9,600 cu. ft.	9,600 cu. ft.
Net area per bed	80 sq. ft.	133 sq. ft.
Net contents per bed	840 cu. ft.	1,397 cu. ft.
Outside wall	480 sq. ft.	480 sq. ft.
Floor construction	740 sq. ft.	740 sq. ft.
Finished floor	740 sq. ft.	692 sq. ft.
Tile partition	388 sq. ft.	528 sq. ft.
Base	144 lin. ft.	232 lin. ft.
Painting and plastering	1,880 sq. ft.	3,700 sq. ft.
Doors	1	4
Plumbing	Lesser amount	
Heating	Probably alike	
Electric	Lesser amount	

Again assuming that the 40-foot private room building will cost $0.75 per cubic foot, or $7,200 for four private rooms, it is safe to assume that the nine-bed ward in the same space would cost about $500 less, or $6,700, or 69.8 cents per cubic foot. The nine-bed ward will cost but $745 per bed, whereas, the four private rooms cost $1,800 per bed, for this portion of the building.

Presumably, however, the proportion of space set aside for accessory services, such as toilets, elevators, stairs, scientific treatment and other departments, would be as large per bed in such cases, consequently the percentage of reduction in contents of the entire building would not be as great as this. The comparison is made merely to illustrate the costliness of minute subdivision.

The interior finish and equipment, is, of course, a matter that affects costs vitally. One of the important items is flooring about which some unbiased information is to be had and much advertising. If our mythical 40-foot building is floored with a forty cent per square foot material, the cost per unit of two rooms is $150; if it is a $1.60 material, the cost is $600, an increase of $225 per room or bed, and of about 9½ cents per cubic foot. If the $1.60 material is used for base as well, the cost is still further increased.

Wainscotings of various kinds are desirable in many places. Their effect on costs may again be illustrated by our hypothetical rooms. Making allowances for openings, a seven-foot wainscot would contain about 290 square feet. Plastering and three coats of paint would not cost over 16½ cents per square foot in Chicago today, a total of $47.85. A relatively inexpensive wainscoting material would cost just ten times as much, or $4,785 per room. There are places where such increased expenditures are justifiable—and these are not always the operating rooms—but the architect and the building committee must keep a careful watch on these items.

Plumbing fixtures play an important part in costs. Figures to illustrate this fact are dangerous for they are so readily misinterpreted. If each patient's room is to have a lavatory, the cost per room is $75 to $100. If a water-closet is added, an additional $125 disappears. If a bathtub is added, $125 more expense is added. The complete plumbing installation for a bathroom cannot be estimated at less than from $325 to $400, depending on the number of fixtures to each plumbing stack, the quality and size of the fixtures and the accessories.

The space occupied by this complete bathroom will cost not less than $450, making a total expenditure of not less than $800 for each bathroom installed. Each toilet represents approximately $400 to $450. If the bath is changed to a shower, and a proportionately smaller building area used, the cost is less.

Little need be said about economies in ventilation. So much has been said and written to deride the elaborate ventilation equipment of thirty years ago, that the pendulum has swung to the other extreme and generally too little is installed. Certainly, the minimum is a positive exhaust fan from the kitchen to insure that odors of food do not reach the patients' floors. The costs are usually rather trifling, even in complete installations, running from ½ to 1 per cent of the cost of the building.

Heating Costs Vary

Heating costs vary, of course, with the location. In the far South, these are reduced to a minimum. The most common forms of heating are steam and hot water. As there is approximately 30 per cent more radiation for hot water than for steam, and as pipe sizes must be proportionately larger, the relative costs will probably be about in this proportion. A great fuss is often made about legless or wall hung radiators, but few stop to count the increased cost of these.

Shields of some kind are desirable where the radiators are against the wall, to prevent soiling

the wall above, but these add from $5 to $15 per shield to the cost. If complete covers are desired, the cost will be increased from $10 to $25 per radiator.

Electrical outlets cost little and they are often a great convenience. The climax was probably reached in a hospital where twenty-eight outlets were required for each private room. Electrical contractors figure anywhere from $7 to $12 per outlet in rough estimating purposes. The cost of multiplying small items such as this is rather astonishing. Sales talk and advertising has resulted in the installation of many interesting devices, electrically operated.

Elevators are more often purchased because of sales talk than because a dispassionate analysis has been made of the relative merits of the different types. An elevator for a five-story building can be purchased for $5,000. An elevator with more "frills" and greater maintenance costs and greater serviceability, may cost as high as $15,000.

Central Refrigerating Plant Desirable

While there is no question of the desirability of a central refrigerating plant in any hospital of over fifty beds, costs are again to be considered.

There are many interesting and valuable devices for use in the boiler room. Some of these are applicable only to larger installations. Stokers, for instance, are often installed under boilers in the expectation that they will save labor. In small installations this is not the case. Whether their cost ($1,000 to $2,500 per boiler) is justifiable, hinges on whether the greater evenness of firing and consequent saving of fuel are highly valued. In the past few years fuel oil has come to the fore. If we ignore the question of operating costs, the hospital must be prepared to spend from $1,000 to $2,500 per boiler for each one equipped.

Multiplicity of sterilizing equipment must be avoided, if costs are to be kept down. Not only is the equipment expensive, but the cost for steam and plumbing lines is often large.

Right at this point it seems opportune to relate the hospital operating budget to the building program and its costs. Inferior or poorly chosen materials are inevitably reflected in operating costs, perhaps not the first year or the second, but, in the fifth, sixth or twelfth year.

Wall painting materials may be had at widely ranging figures, both in the cost of the material and in its application. A 10x16-foot room will contain about 600 square feet. It may be painted under contract at a cost anywhere from $20 to $35. The same number of washings will be required in any case, but at the lower figure the work will not last over two years and at the higher figure it will last four years or more.

Initial cost	$20.00	$35.00
Repainting at end of two years	12.00	
Three days loss of room while painting and drying, at $5 per day	15.00	
	$47.00	$35.00

At the end of two years, the expenditures for the inferior material would have been $47 and $35 for the better material, with two years yet to go. In piping, electrical materials, floors, wall materials, and innumerable places in the building similar examples may be given.

Here it is interesting to point out the results of a well known character trait—the desire to purchase for little money. It is a well-nigh irresistible temptation for some building committees to report back to their boards that they have let contracts for less than the lowest figures received when bids were opened, by eliminating nonessentials that the architect thought were necessary. Some years ago, a building committee decided they would save $600 on a $350,000 project by eliminating the caulking specified around window frames. The chairman was an experienced builder and assured the committee that he had not found it necessary in any of the many office buildings and apartment houses he had constructed. The first two winters, the management complained that the rooms exposed to the severe west winds were cold at times, when all other parts of the house were comfortable. The third winter, during an exceptionally cold spell accompanied by a westerly gale, all the patients had to be removed from this side of the building, and about four to six main plumbing lines froze.

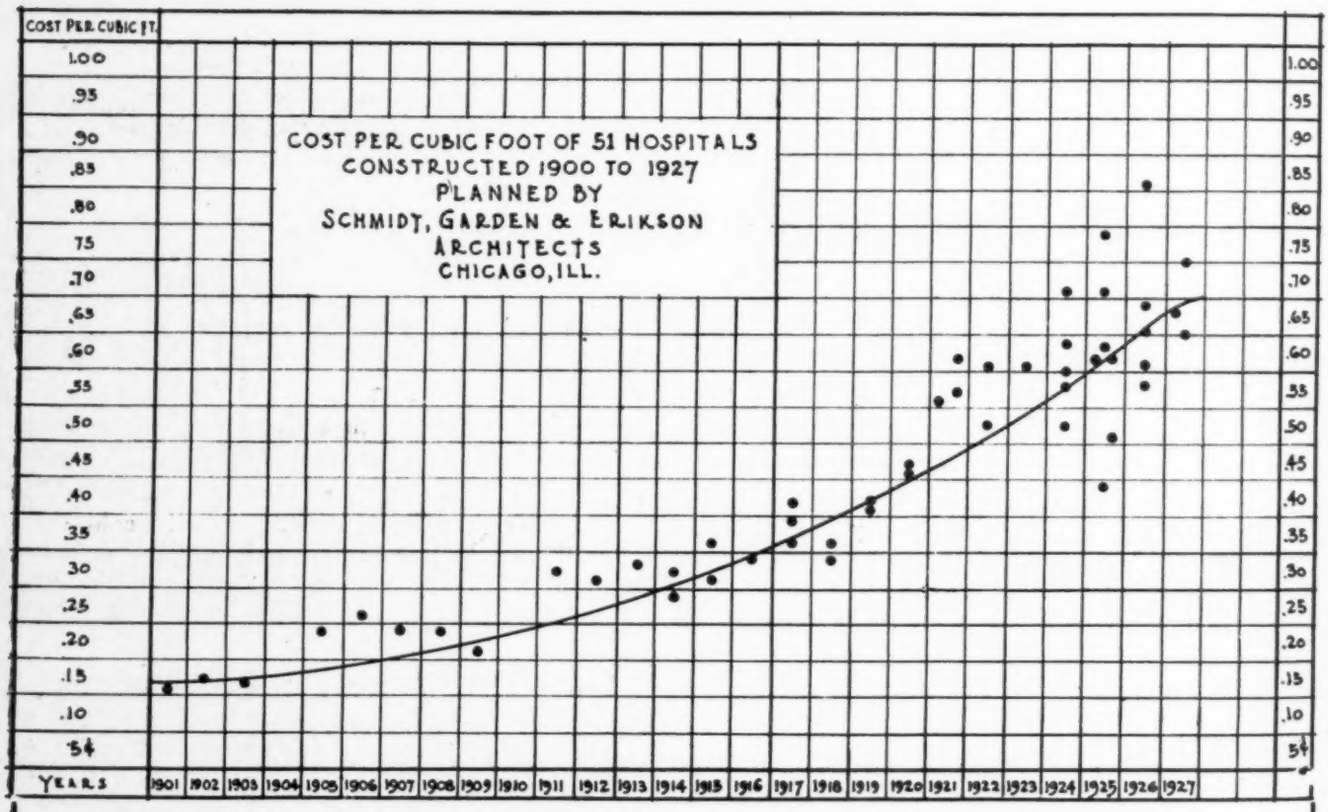
The cost of repairing and thawing the plumbing lines is not known for it was done by the hospital's own maintenance men. The loss of revenue has never been calculated, but was considerable. The architects received instructions to proceed immediately to let contracts for the caulking. In the seven years that have followed there has not been a day that the rooms on the west side have not been comfortable, and there have been no frozen pipes.

A comparative tabulation follows:

Original saving	$ 600.00	
Heat losses during two and a a half winters		unestimated
Repair of frozen pipes	100.00	(estimated)
Loss of revenue	250.00	(estimated)
Caulking	1,200.00	
Cost when finally installed	$1,550.00	

There probably was never an article published or a paper read on hospital costs that did not decry expenditures of the hospital funds for exterior adornment—sometimes sneeringly called "monuments to the architect" (wouldn't mausoleums be a better term?). The architect usually has a keen sense of his community responsibilities, and he would be the last willingly to betray that responsibility. These so called "monuments" are more often a reflection of the desires of the directors, either unconsciously by selecting an architect who does the grandiose thing, or consciously, by directing him to do so. But this constant iteration has had its effect on hospital appearance. The change from the grandiose hospital monuments of twenty-five years ago to the simpler buildings of today, was effected by the architects themselves in leading the public to an appreciation of simpler, better and more human architecture.

One need only compare the typical overornate bank of twenty-five years ago with the simple, severe structure of today. And it does not follow that the simple bank of today is any less expensive than the overornate one of the beginning of the century. Then scagliola was used; today, it must be marble. Nondescript ornaments are now replaced by a few bits of carving and sculpture, done by a skillful sculptor, costing two or three times more than the ornaments of the earlier period. And that is as it should be, quality and not quantity. On the exterior of the hospital, the materials should be of the best, the most enduring. Some leeway must be given the architect, for even our efficiency hounds, the factory managers, admit that comeliness in their factories is



Curve of Hospital Construction Costs for Twenty-Seven Years

EACH dot represents a hospital built in the year noted below, and for the cubic foot costs in cents, by figures in the left-hand column.

All of these hospitals are of fireproof construction and rated as being first-class in detail and finish at the time of erection. The steady rise in costs is due not only to the increase in costs of building materials and labor, but to the greater complexity of the plan, the use of better and more expensive interior finish, and the addition of many conveniences.

The buildings noted are large and small hospitals. Each of the hospitals is a complete unit.

Schmidt, Garden & Erikson, Chicago, the architects who designed these fifty-one hospitals, have not used the costs of additions to hospitals, or those of governmental custodial institutions, or other types differing from the more general type of hospital, or those which were admittedly of cheap design. Obviously, lower priced buildings are and can be built, but the cubic foot costs of such hospitals plotted by themselves, over the same number of years would result in a similar curve.

not to be overlooked. How successful the architect will be depends entirely on his ability and his perseverance, for an attractive building is the result of hard labor.

The choice of material for the exterior will depend somewhat on the location. Our excellent transportation facilities have taken much of the local color out of American architecture. Bedford stone has almost supplanted every local stone, no matter how excellent. Ease of transportation, plus the economies of large scale operation, and its natural qualities, has made it the premier building stone. The national advertising campaign, too, has had its effect in chasing out the local stones.

Because of cost, stone is generally eliminated from consideration, except as a trimming material. Generally the only choices remaining are brick or stucco. Until a few years ago, stucco would not have been given serious consideration for any important building. Thanks to California, Florida and the advertising of the cement manufacturers, this material meets less resistance than formerly. Stucco is a time-tested material found in practically every European country, from Sweden to Italy. The Children's Hospital, Florence, Italy, upon which we find Andrea Della Robbia's famous bambinos, is of stucco, trimmed with stone.

Many Colors of Brick Used

Brick of every color, from white to black, and at prices to suit every purse is available. Stone, terra cotta, or artificial stone or marble may be used for embellishment or for practical purposes. The effect desired by the architect, if he is an artist, will generally be the determining factor, coupled, of course, by a consideration of the funds available.

There are about as many different kinds of hospitals as there are people who build them. There is the difference between the city or state operated institution and the privately owned and operated one. The city, state or federal hospital probably costs more to build than the same institution if built by a private enterprise. The reason for this is difficult to explain.

The simpler the hospital, the less its cost, of course. The rapid turnover hospital (acute disease, general or maternity) will cost more per bed than a slow turnover hospital (an orthopedic or tuberculosis); if the hospital is chiefly used to give custodial care, the less the building will cost.

The time to buy is when others wish to sell. When that may be is rather uncertain, but, broadly speaking, in the North it is in the Spring that our thoughts turn to building. The contractors and material dealers are besieged for figures. They figure accordingly. Another spurt, though not so marked, is to be noticed in the Fall, when buildings are started to be ready for Spring renting. Much of this is due to the popular impression that winter building is impractical and expensive. There are many contractors who take the position that it is less expensive to do winter building because of the greater efficiency of labor. That it is practical, is evidenced daily in the thousands of buildings erected in the North every winter. If there is any one time of the year that may be considered better than another to start, it is perhaps, just before the Spring rush. It is true that in the northern states, this may mean some excavation of frozen soil, but it also means that, with good luck, the contractor will be one or two months ahead of the rest of the crowd and should obtain better prices and better labor.

Housing of Personnel

The housing of personnel varies so much that it would only further complicate this discussion to more than mention it. The house staff is generally housed within the hospital buildings. The number of this staff will, of course, affect the costs per patient's bed. In Catholic hospitals the Sisters are often quartered in the main hospital structure, although, if it is a large hospital, a separate wing is usually provided. These quarters are usually simpler in finish, accessories and equipment than the patients' rooms. They increase the cost per patient's bed materially. The simpler finish and detail tends to reduce the cost per cubic foot of the entire structure.

The cost of housing the nurses is influenced by many of the same things that affect hospitals. The cubic contents per bed may vary from 2,500 to 7,500 cubic feet. The cost per cubic foot at Chicago prices is from 35 cents for ordinary construction to 75 cents for a high fireproof building with all the "trimmings." As the number of nurses to be cared for depends on a multitude of factors, such as the kind of hospital, character of service and the presence or absence of a training school, the equation of costs consists of a series of unknowns, and to arrive at an answer these unknowns must be determined.

It is with fear and trembling—fear that the information may be misinterpreted, and trembling because it may be used against us—that we set down the accompanying figures. To draw any definite conclusion from these figures, requires an intimate knowledge of each building, its locality and the whimsies of those in charge, all of which would require a separate volume.

And which of these buildings, varying in cost

from 45 cents to 85 cents per cubic foot and from $3,000 to $9,000 per patient bed, is the best investment? While the details supplied seem to be sufficiently voluminous to judge the quality and efficiency of the buildings, they tell nothing of the needs they were intended to fill. The community needs, the quality and experience of the medical personnel and of the directorate, the operating funds, their sources and their expenditures, must be carefully studied in each case. And then, as a final problem, judgment must be passed upon the philosophy and ideals.

Each year sees increased costs of all kinds of building. New and better materials are introduced, but usually at an increased cost. The fireplace was an improvement over the fire in the middle of the room, the stove over the fireplace, the furnace over the stove, steam over hot air, and hot water over steam. With each change, costs increased. Yearly there is an increasing importance attached to quality building; more and more it is found that cheapness is often expensive. This applies to all types of buildings, but nowhere more than to the hospital. Comparison of the detail, accessories, and finish of the best hospitals of twenty-five years ago with the best of today, is startling in its revelations. The limit is not yet in sight.

Treating Mental Patients in a General Hospital

The functioning of a division of neuropsychiatry in a general hospital was recently discussed in a paper read at a meeting of the American Psychiatric Association, by Dr. Thomas J. Heldt, division of neuropsychiatry, department of medicine, Henry Ford Hospital, Detroit.

Dr. Heldt demonstrated that a general hospital can get excellent results with mental patients and that a hospital under those conditions becomes a good training center not only for physicians but also for nurses and other people who should know something more about nervous and mental diseases. The following paragraphs are excerpts from Dr. Heldt's paper:

"Any general hospital worthy of the name should consider itself able to care for certain types of nervous and mental cases, and should proceed to make provisions to that end. The primary requisite is a neuropsychiatrist, on a full-time basis if possible, otherwise in a consulting and directory capacity. The former is much to be preferred. If the latter, the neuropsychiatrist must give sufficient time to discharge his responsibility properly and the hospital must give him sufficient latitude to make his efforts effective. The limitations of such arrangements lie in the type of cases to be cared for—only borderline cases should be attempted. A general hospital employing a full-time psychiatrist may attempt the management of any and all types of psychiatric patients. Consideration must be given to compliance with all state regulations 'for the care of the insane.' Every state in the union, in fact each and all United States possessions, has laws or rulings regarding its nervously and mentally handicapped citizens and charges. These rulings must be complied with in spirit if not in letter."

"Isolation and segregation of the neuropsychiatric patients in the general hospital is a matter deserving of the closest study. It is generally accepted that such constitutes the first step in the proper establishment of a neuropsychiatric division. These are, however, more matters of expediency than of necessity. They promote ease of management but are compulsory only where facilities for care are inadequate. The usual neuropsychiatric patient may be granted a room or bed amidst the medical or the surgical population of the hospital, provided the attending physicians and nurses are sufficiently trained in neuropsychiatric methods to enable them to meet the needs of the case. It is the unusual neuropsychiatric patient that requires isolation and special care and precaution."

"In contemplating the establishment and the maintenance of a division of neuropsychiatry in a general hospital we judge that no preconceived plan of any proportion can be set down in a general hospital setting and be expected to function as such. The neuropsychiatrist, of all medical men, knows how important it is to individualize patients and their situations, so in introducing and developing neuropsychiatry in the general hospital, each general hospital setting is different and must be thoroughly individualized and evaluated. Upon the basis of such evaluation must the plan of approach and of development be carried out with anticipation of and provision for flexibility and elasticity in the application thereof.

"In this regard also, in our experience, the range of case, or diversity of reaction-type, whether psychoneurosis or psychosis, cannot be increased any faster than the development of associated understanding and experience on the part of the entire professional and administrative staff of the general hospital. Just as personalization of the patient promotes success in treatment and impersonalization of the patient promotes failure, so with the general hospital and neuropsychiatry. Gradual growth and cultivation of the understanding of the professional and the administrative personnel insures sympathetic cooperation and progress—personalization. Sudden installation of a detailed preconceived plan invites a quizzical attitude, misunderstanding, and, that same isolation that matters of the insane have been always awarded—impersonalization."

Why Labor Turnover Is Expensive

"Hiring and firing is expensive both in the actual outlay of money and also in the inefficiency which always prevails where changes in personnel are frequent," says Edgar James Swift, head of the department of psychology, Washington University, St. Louis, in a recent article in the *Journal of the American Dietetic Association.* "No organization can advance unless it retains a certain continuity. Some kinds of mechanical work can, of course, be picked up rapidly by new employees, but the mechanical features of an organization do not represent its lines of growth. Progress requires prevision. There must be a forward glance, but those who plan for the future must not be unmindful of what has gone before, or of what other similar organizations are doing. In other words, development and advancement in any type of work require a knowledge of the past history of the organization joined with some insight into the future."

Modern Trends in Hospital Construction

By C. STANLEY TAYLOR
New York

A PROGRAM of tremendous expansion in the provision of hospital facilities is unquestionably under way. This program is, of course, greatly augmented by the hospitalization schedules of various states, notably that of New York State, which alone promises almost $40,000,000 worth of new hospitals in the state building program.

Another factor that is having its effect is that many large city hospitals are coming close to a state of obsolescence, and require either remodeling or in many cases entirely new structures. In addition to these factors there has also been established a definite recognition that hospital facilities in this country have been for many years inadequate. It is not surprising, therefore, to find movements under way in a large number of communities to create new modern structures of this type. both through private and public financing.

The fact that we are now in an era of greatly increased hospital building has been well borne out by the recent forecast made by the *Architectural Forum*, covering building activity in 1928. The *Architectural Forum* has for six consecutive years conducted an extensive survey among architects by sending out a series of confidential questionnaires to all of the architectural offices of the country. In these questionnaires, architects are requested to report projects on their boards or projects that they feel certain will be carried out during the following year. The figures thus derived give an accurate cross-section of the new building program, covering structures of all types, and form the basis of forecasts that have been surprisingly accurate when checked against the reported construction at the close of each year.

For the year 1928 this survey indicates that approximately $300,000,000 will be spent for new hospital buildings in the coming year—an amount greatly in excess of any previous year. In view of the fact that this tremendous program is under way, it becomes evident that serious consideration of the architectural and structural problems in the new hospital will be required, not only in relation to technical details, but also from the point of view of the human element.

Obviously, there is a marked increase in the use of hospital facilities by persons who in the past have more or less avoided hospital care except for extremely serious illnesses or for surgical operations. This is due partly to

An Important Activity

THE figures of the year 1927 indicate a year of considerably greater activity in hospital and institutional construction than has ever before been known.

In order to give some indication of the amount of hospital building that is taking place, the following figures are presented. These figures are taken from the reports of the F. W. Dodge Corporation, New York, and represent the only data that are available for a large section of the country on contracts let for hospital building. It will be noted that the figures cover only the thirty-seven states east of the Rocky Mountains, and it is quite probable that at least 10 per cent may be added to them to cover the entire country.

Hospital Construction in 37 Eastern States During 1927

	No. of Buildings	Volume of Sq. Ft. Area	Value in Dollars
New England States	96	1,201,800	$ 12,359,500
N. Y. State and Northern N. J. ..	211	4,407,400	43,866,800
Middle Atlantic States	135	2,112,000	18,157,200
Pittsburgh District..	69	1,264,200	15,393,000
Central West	246	5,296,600	38,061,900
Northwest District .	42	325,000	2,318,200
Southeastern States.	114	1,041,800	8,204,300
Texas District	47	501,100	3,593,000
37 Eastern States ..	960	16,149,900	$141,953,900

Courtesy of Henry H. Meyers, Oakland, Calif.

Highland Hospital

Highland Hospital, Oakland, Calif., is of the Spanish Colonial type of architecture. A long terraced approach leads to the administrative building, the imposing entrance of which is shown here. The hospital is finely situated on the hills overlooking Oakland and San Francisco Bay, in the heart of the city's residential district.

general public education and also in a great measure to the amazing advances in the science of medical practice. The immediate result of this progress is reflected in the increased size of buildings and in the rapidly growing complexity of the average hospital layout and plans.

In fact, the design and development of hospital buildings have become complex and technical problems in the architectural and structural engineering fields. The advances made in medical science have forced a corresponding development in the structural and mechanical facilities needed to provide modern care for patients.

Hospitals are in themselves becoming specialized and the skilled designer must be familiar with the requirements of many different types of medical buildings, ranging from those used for contagious diseases to institutions designed solely for special diseases, such as the treatment of cancer. General hospitals having facilities for all forms of medical care must necessarily continue to exist in the smaller communities, but their use is markedly diminishing in metropolitan centers where special types of hospitals divide the work of treating disease in order to give each type of case the most advanced care.

The size of individual hospital projects has grown enormously within the last decade. Skyscraper construction has definitely entered the hospital field, as evidenced by the new medical centers in New York and Chicago. Changes are occurring constantly in the mechanical facilities that medical men require, and even hardware used in hospital buildings has become a subject for special research.

Complexity of Hospital Design Increases

All of these factors set hospital design and construction apart from all other types of building operations as a distinct problem, worthy of the attention of the best minds in the building industry. It imposes a burden as well as an obligation on manufacturers of building projects to find new materials and new devices adapted to modern hospital practice. It imposes upon the designer the necessity for a thorough knowledge of medical and surgical treatments, ranging in scope from food service problems to the installation of highly developed therapeutic apparatus. In short, hospital design has passed beyond the individual capacities of the average architect and has brought about the need for highly trained consultants and specialists to advise on the many technical details involved in the development of even the relatively small community hospital.

There are other trends in hospital design that are worthy of note. One is the marked change in the architectural appearance of hospital buildings. Psychologists have played an important part in eliminating the cold, harsh and often ugly appearance of hospital buildings, both as to the exteriors and as to the decorative treatment of the interiors.

The modern hospital today has a wholly different appearance from the buildings erected a decade or two ago. Hospital boards are permitting, in fact they are instructing, architects to exercise their greatest skill in the achievement of attractive exteriors. The old institutional character is giving way to buildings closely resembling fine residences. City structures can hardly be distinguished from fine apartment buildings and hotels. The smaller community hospitals are receiving architectural treatment appropriate to their environment, and instead of being severely plain, service structures, they are becoming civic monuments in which the community can take pride.

Marked Change Noted in Interiors

An equally marked change is taking place in the design of the entire interiors of hospital buildings. The lobbies and public spaces have lost their bare, prisonlike character. In the private rooms and wards the ideal is now to produce a homelike appearance, so that the patient loses the depressing sense of having been removed from his own comfortable environment to a monk's cell. This change has had a happy effect upon the architectural aspects of hospital design.

Were it not for this factor, it is probable that architects would have lost a large part of their function in the development of such structures. It would have become an engineering problem, placed wholly in the hands of specialists entirely devoid of esthetic talents. Hence, while the complexity of hospital design is growing to the point where its layout and its mechanical appurtenances must be planned by the specialist, the architect and architectural building products are increasingly important factors, because of the need for incorporating the service facilities into attractive buildings in which patients will enjoy at least as fine an environment as the homes from which necessity temporarily removes them.

Another factor has entered into hospital design. As the need for specialized equipment has increased, the cost of hospital construction has mounted in proportion. While the public appreciation of the advantages of modern hospital facilities has been growing rapidly, funds for hospital construction have not always been available in adequate amounts. Hence, the hospital staff planning a new structure has been faced with the

need for meeting advanced medical and surgical requirements and improved architectural design without a proportionate increase in the funds available for these purposes. This has led to the making of careful studies, designed to keep the cost of hospital buildings on a practical basis.

Manufacturers are well aware of this situation and are constantly endeavoring to produce materials for floors, walls and the structural elements of hospital buildings that will be fire-resistant and will meet the requirements of safety, sanitation and fine appearance at moderate cost. That they have been largely successful in this endeavor is a contributing factor in the indicated expansion of hospital construction during recent years.

Fire Hazards Must Be Eliminated

Another important trend in hospital construction is toward the absolute elimination of the fire hazard. Fires in any type of buildings have their attendant casualties and their direct and indirect losses, but nowhere is such a catastrophe so horrible to contemplate as in a hospital containing a large number of more or less helpless patients. It is natural, therefore, that extensive study of this question of eliminating fire hazards should have been made in relation to hospital buildings. Probably no type of building is as carefully controlled under local building codes and regulations, but there is still a great amount of development to take place along these lines. This is particularly true in the case of hospitals in outlying districts, which do not come under any form of legal or building code restrictions and regulations. Here a moral duty is primarily imposed on members of hospital committees and on the various executives of hospitals to make certain that nothing but the safest type of construction shall be permitted.

Other factors that enter powerfully into the designing and construction of hospital buildings are the problems of depreciation and maintenance. The average hospital structure is primarily created to render a highly important community service and is meant to function for a great many years. The original construction cost is high, and there is no place for the false economy of using inferior materials and construction methods. There is no reason why a modern hospital building should not have a useful life of at least sixty or seventy years, and when it is so constructed that it will not give service for this period, it is evident that a great burden is ultimately placed on the community.

This situation also introduces the question of maintenance costs. Hospital administration is unquestionably expensive and whether its financing comes from the public through subscription or taxation or from endowment income, it is evident that if maintenance cost can be kept down there will be a corresponding benefit because more funds will be available for actual care of patients. To this end it is highly important that only materials and equipment of long enduring qualifications should be admitted into the hospital plan and specifications.

While many of the trends indicated in this brief article are to be found in other types of buildings, most of them must be emphasized in the hospital building field, where the structures are designed to operate efficiently over a long period of time.

Hospitals and institutional buildings differ considerably from most other types of structures because they partake in no sense of the investment or speculative functions. In other words, these structures are not built for profit in a direct financial sense. They cannot earn a sinking fund which will ultimately return or greatly decrease the investment. This is why they must be built for long life and for low maintenance costs, and it is with this idea in mind that all hospital programs should be developed.

If funds are limited, it is far better to plan the complete structure and build only a part of it than it is to attempt to provide extensive hospital space facilities through the medium of cheap construction and inferior architectural design.

No type of structure needs so much preliminary study before the plans and specifications are drawn. Once the hospital is built it is difficult to remodel it or to change the arrangements of functional space. Obviously no hospital should be planned without expert consulting service and without the most careful consideration of the interrelationship of units and their efficient development for the specific service required.

Ways in Which Trustees Can Help

Ingersoll Bowditch, trustee of Faulkner Hospital, Jamaica Plain, Mass., is responsible for the following suggestions on how the trustee may benefit the hospital:

Trustees interested in science or chemistry could work very well with those in charge of the laboratories and x-ray apparatus of the hospital. Business men could assist the treasurer in financial matters, such as making investments and preparing the annual budget. Nearly every hospital has a committee on finance whose duty it is to approve the purchase and sale of securities. This committee should be familiar with the investments of the hospital, and at least once a year, when the annual account is made up, should go over with the treasurer the list of securities and decide what changes should be made, if any. If this were done the hospital would receive great benefit.

School of Nursing at Mount Sinai Exemplifies Modern Planning

By ROBERT D. KOHN and CHARLES BUTLER
Architects Associated, New York and
S. S. GOLDWATER, M.D.
Consultant, New York

THE new building of the Mount Sinai Hospital School of Nursing, New York, is a combined school and nurses' residence. For its construction there was available an interior city lot, with a southerly frontage of about 175 feet on a 60-foot street. The average depth of the lot is a little over 100 feet. At present the building stands wide open toward the north, facing on this side a vacant plot 320x100 feet, upon which three tennis courts have been laid out. Beyond, stretching from Ninety-Ninth to One-Hundred-First Streets, lie the seventeen companion buildings of Mount Sinai Hospital. Toward the northwest there is a good view of Central Park. From the roof there is a splendid vista of the rivers east and west of Manhattan Island.

School of nursing, Mount Sinai Hospital, New York.

The program called for a residence to accommodate 478 nurses, and an infirmary of twelve beds. By the extension of one wing, 160 beds can readily be added in the future. From cellar to roof, the building contains sixteen floors, eleven of which are used for dormitories.

The basement contains trunk, linen, and general storage rooms, nurses' sewing room and hand laundry for small work, locker room for nurses' laundry, shoe polishing and shampoo rooms. The southeast corner is occupied by the receiving room for general supplies, which are taken in at the street level at this end of the building and are handled by a freight elevator. This east end of the building also contains the main freight elevator, extending to the roof, and the soiled linen chute, with soiled linen room in the subbasement.

At the west end, directly opposite the tunnel entrance by which the nurses approach from the hospital, are the main stairs leading up to the first floor and continuing up throughout the building, and the two passenger elevators. A similar staircase at the east end is also carried to the roof.

The ground floor is entirely devoted to dining room and kitchen service. On the north, lighted by windows on two sides and overlooking the tennis courts, is the main dining room for student nurses, wainscoted with golden brown ceramic tile, with blue and buff decorations and hangings, arranged for cafeteria service, but so planned that it may be transformed for waitress service if this should prove desirable. To the east are the kitchen, dishwashing room and refrigerators, with two smaller dining rooms for help and attendants, also arranged for cafeteria service. Adjoining the cafeteria is a cracked ice refrigerator to which the students have free access. The ceilings of the main dining room and dishwashing

room are treated acoustically. The entire south front is occupied by the officers' and graduate nurses' dining room, with a small private dining room for the principal, these rooms being arranged for waitress service, with their own serving room.

In the equipment of the kitchen, monel metal has been employed wherever possible. The storage facilities are ample and arranged in such a manner that supplies may be received conveniently either from the central storerooms of the hospital, or, if direct deliveries are desired, from the supply entrance of the school itself, on Ninety-Eighth Street. Near the bottom of the service stairs, leading from the street to the kitchen level, are commodious locker and toilet facilities for men and women servants, respectively. The kitchen is overlooked by a small office for the dietitian.

The first floor, at the street level, contains the main entrance, which is at the west end, with general office, peg board, telephone and post office, and offices for matron and house mother. Two passenger elevators open directly off the foyer. Extending across the south front to the east of the offices is the principal's suite. With the exception of a guest room and bath in the east wing and a bedroom and bath in the west wing, the remainder of the floor is devoted to general recreational purposes. In the west wing nearest to the entrance are three small reception rooms for visitors, while the end of this wing is occupied by the supervisors' living room.

A broad corridor leads from the entrance foyer to the more intimate living rooms, the library at the southeast corner and the large living room in the east wing. These rooms are wainscoted in oak. The general recreation room, which has a seating capacity (using portable seats) of about 400, is in the centre of the building under the main open court formed by the two north wings, and is reached directly from the main transverse corridor and also from the living room through a small conservatory; this room has a wood floor for dancing, and a small stage with dressing rooms for entertainments. A pantry has been provided with dumb-waiter to the kitchen. The recreation room walls are wainscoted with wood to the height of the window sills, with paneled plaster above and a domed ceiling. The accompanying photographs scarcely do justice to the colorful treatment of these rooms by M. H. Blum,

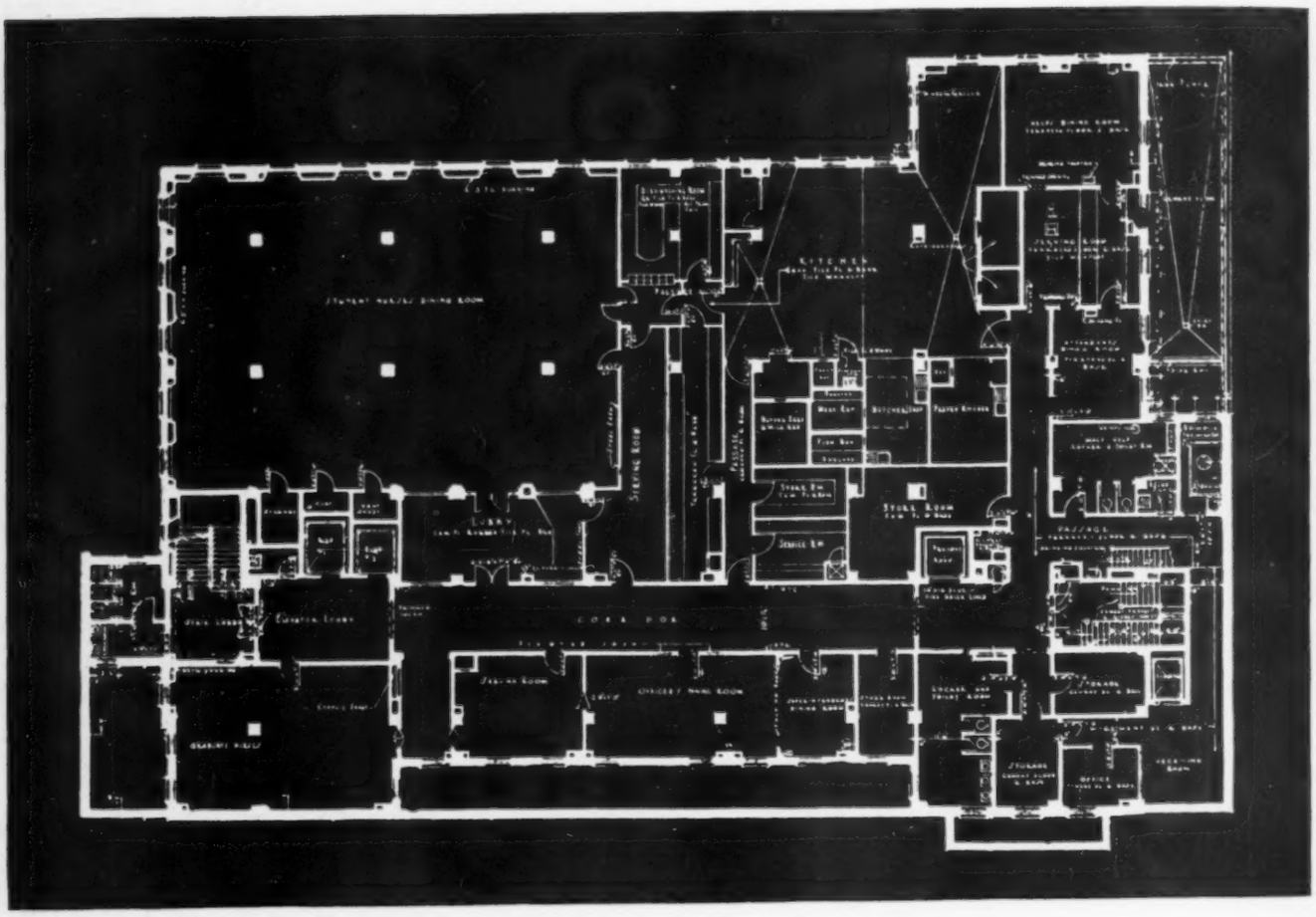
The main entrance hall.

Entrance to students' dining room, seen from corridor.

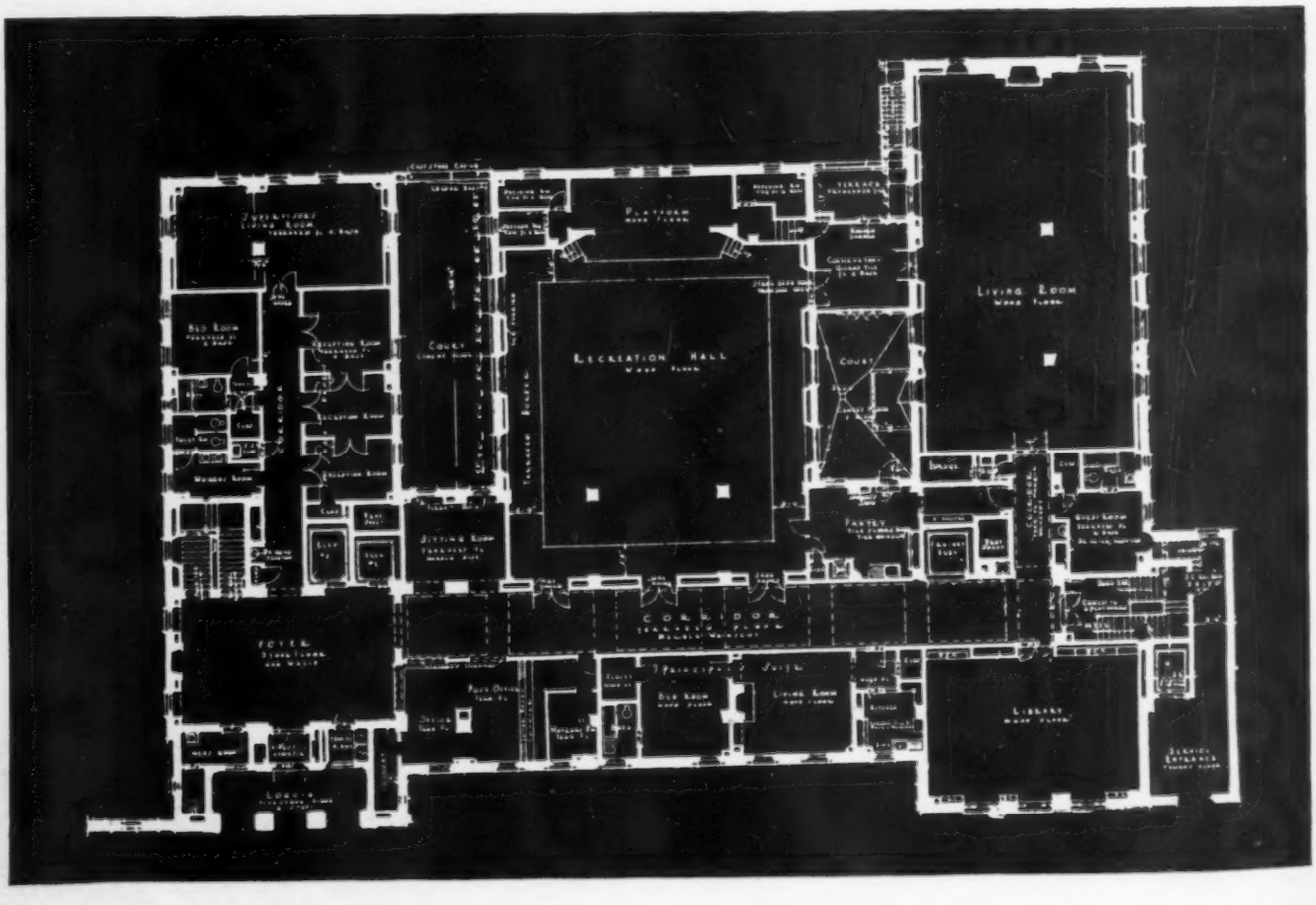
interior decorator, to whom the task of furnishing was intrusted. The entrance foyer has an ornamental fireplace and is wainscoted to the ceiling with Rochambeau stone, warm gray in tone, while the corridors on the first and ground floors have a low wainscot of Pouillenay rose marble.

The office and control station face the lobby, and directly opposite the office is an open waiting room for callers. The switchboard operator has close at hand and under visual control a bronze four-position, in-and-out board which, by the use of movable buttons, indicates whether a nurse is in her room, is on duty in the hospital or is elsewhere. The in-and-out board is double faced, and is operated from an alcove by the nurses themselves. On the opposite side of the alcove are the letterboxes with individual keys. By means of a buzzer system, the telephone operator and office clerk can signal to every room in the building;

Student nurses' cafeteria.

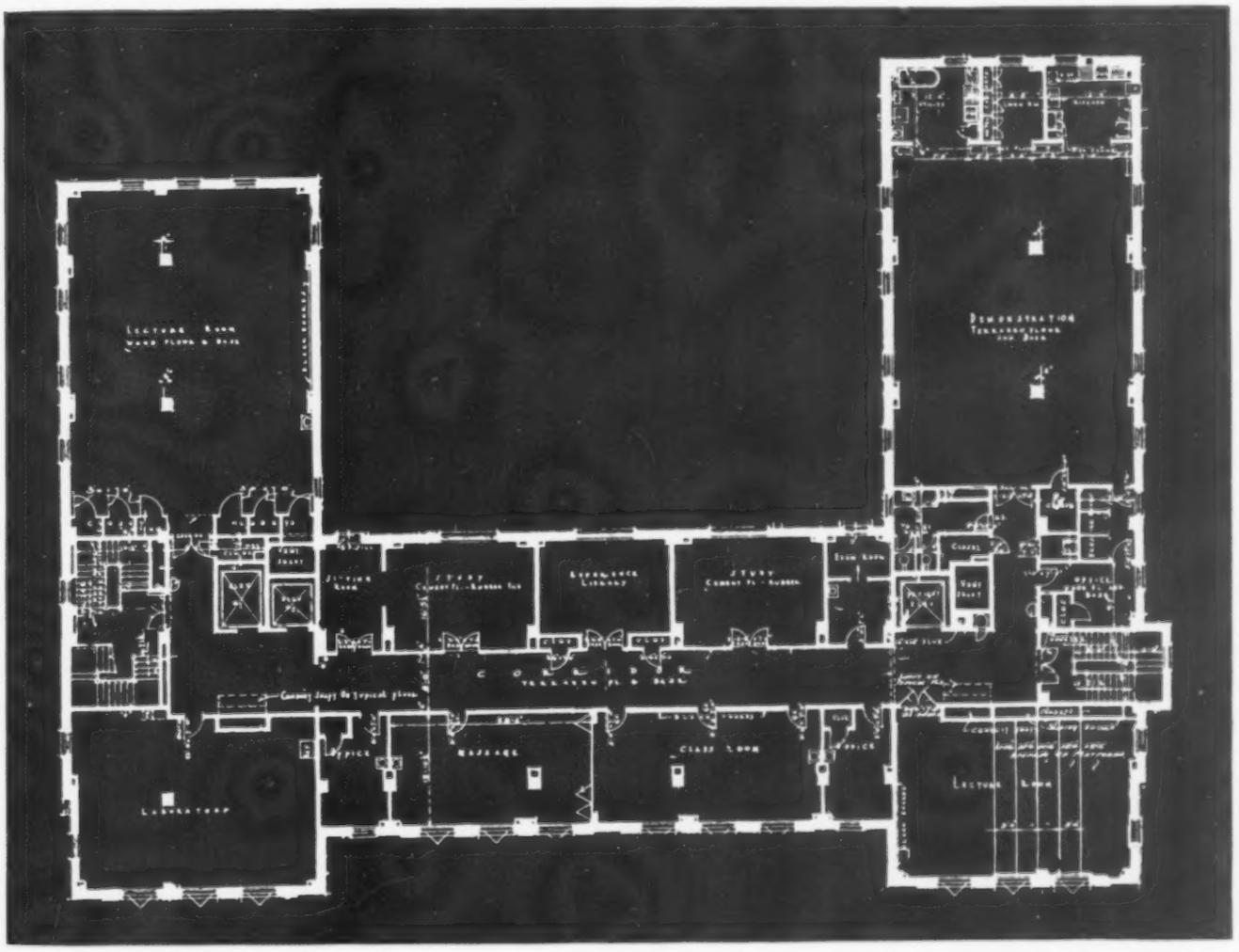


Above, basement floor plan; below, first floor plan.



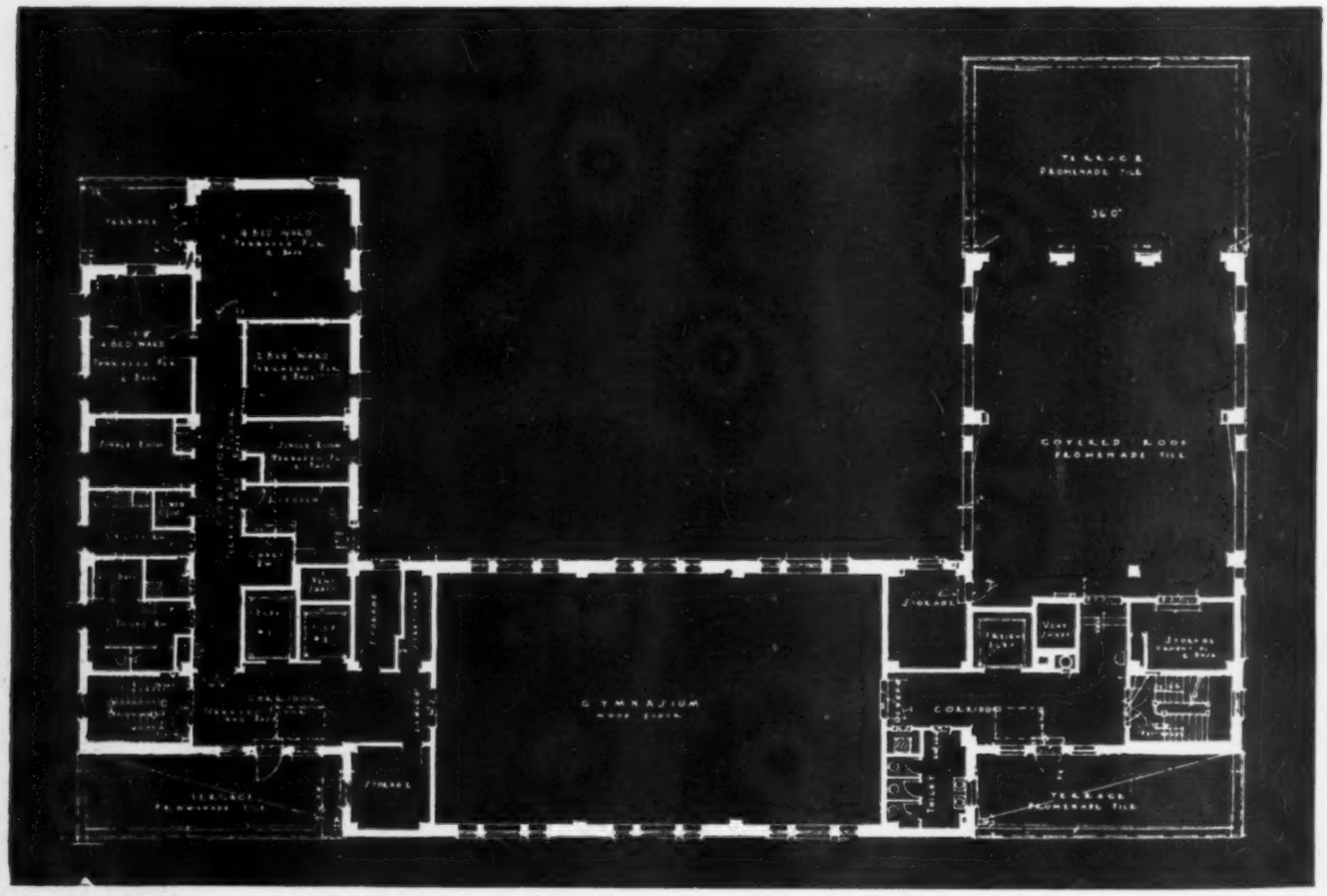
response is by means of telephones conveniently placed in central locations in the corridors. Individual room telephones are provided for certain officers.

The views of Elizabeth A. Greener, the principal of the school of nursing, and of the more important members of the faculty were considered in the planning of the home, and especially of the second floor, which is devoted to teaching. Opening off the large demonstration room or nursing

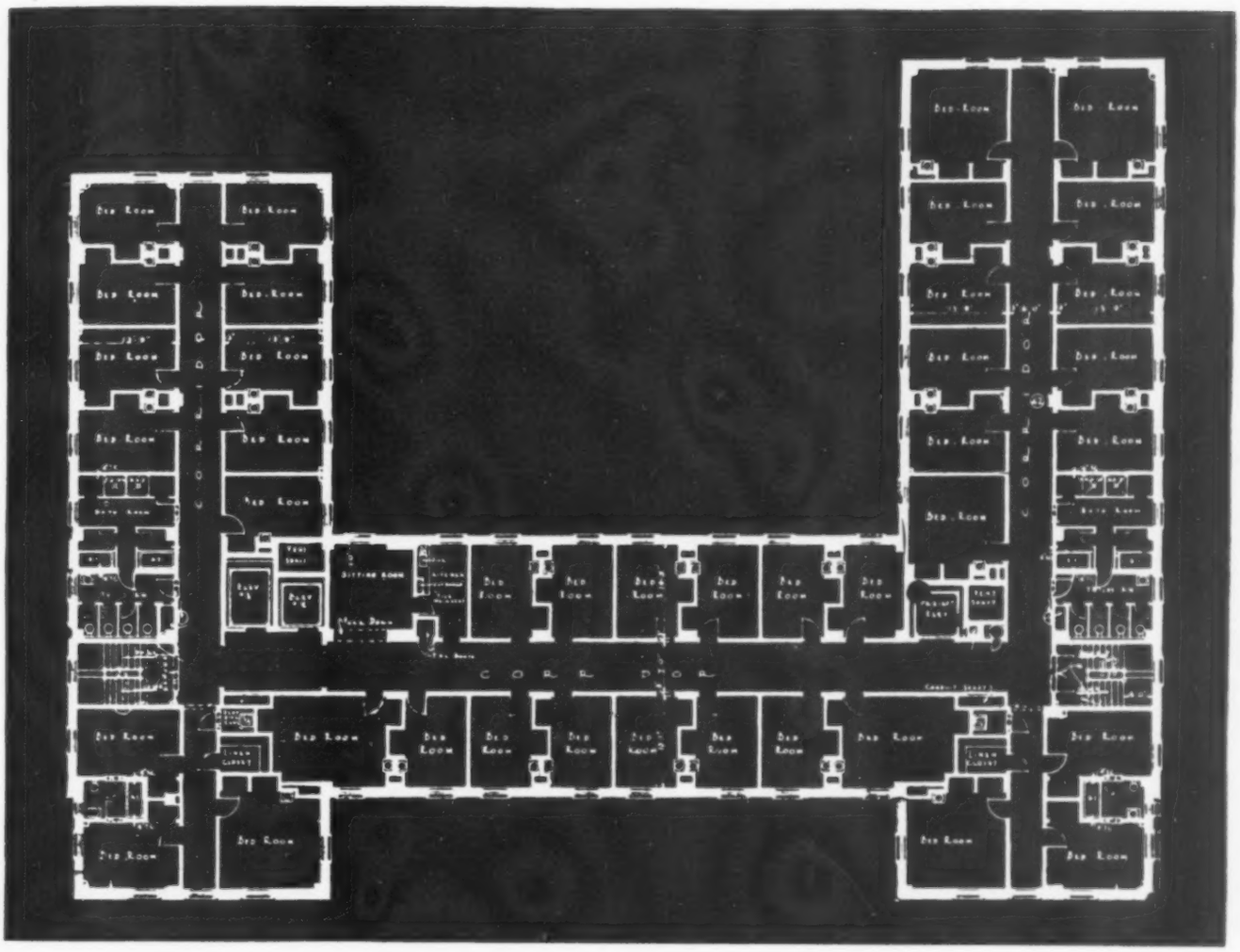

LECTURE ROOM
DEMONSTRATION
COURT
COURT
COURT

Student's room showing especially constructed closet.

The typical bedroom floor contains thirty-three single rooms and seven double rooms, the latter usually occupying the most desirable locations. Of the single rooms, four are arranged in two suites of two bedrooms and bath for head nurses, one suite being placed in each wing. Each of the two wings contains a bath and toilet unit, each consisting of four toilets, two baths and two showers, while lavatories are provided in each room, with built-in medicine cabinet over. Tile



Plan of fourteenth floor.



Above, typical floor plan; below, sun parlor and open roof.

protects the wall spaces adjacent to the lavatories. For each nurse there is a built-in wardrobe closet of special design, with a full-length mirror inserted in one of the double doors.

Typical single bedrooms for students are 8 feet 8 inches by 13 feet to 8 feet 9 inches by 14 feet; double rooms are 13 feet by 13 feet 4 inches and 12 feet by 15 feet 6 inches (these measurements are exclusive of closet space). The central or connecting corridor on the dormitory floors is 7 feet wide; the side corridors, which are 6 feet wide, are open at both ends. Bedroom doors have metal combination bucks and jambs; the doors are of birch, finished in walnut.

A Sitting Room Is on Each Floor

On each dormitory floor there are two cleaners' closets, two linen closets, a coin box or public telephone, a house telephone, and two drinking fountains. For the common use of the pupil nurses, there is an open sitting room on each floor, connecting with a kitchenette.

The corridor floors have linoleum insets with terrazzo coved bases, while the bedrooms are floored in terrazzo throughout. All bath and toilet units have tiled floors and wainscots.

The twelfth and thirteenth floors are planned with twelve suites of two bedrooms and bath each, four single rooms and bath, and one suite of living room, bedroom and bath on each floor. Typical bedrooms on this floor measure 12 by 13 feet.

The fourteenth floor contains in the central portion a gymnasium, with maple floor and face brick walls, large enough for basket ball. The east wing is occupied by an open air sleeping porch, two-thirds being covered and the northerly portion open to the sky.

In the west wing is the infirmary, with accommodations for twelve patients in single rooms and small wards, with utility room, kitchen, toilets and bath.

Advantage has been taken of the setbacks, required by the zoning law, to secure tiled terraces on the eleventh and fourteenth floor levels, accessible from the corridors, and with solid parapet walls so that they may be utilized by the nurses. At the third floor level, where the main body of the building sets back 6 feet, is a terrace extending across the entire front of the central portion.

The recreation and teaching sections of the building, which extend up through the second floor, are indicated by the stone enrichments surrounding the larger windows on these floors, while the residential portion extending up to the fourteenth floor is treated with great simplicity, the only break occurring on the eleventh floor, where the line of the setback is carried around the building with a decorative bank of brick, on which appear on the south front two shields bearing the arms of the City of New York and the symbols of the Mount Sinai Hospital.

At the fourteenth floor level the second line of setbacks is featured with brick pattern bands, while the arched windows and pediments show the gymnasium, which is flanked by the towers containing the elevator machinery and the tanks.

The fact that the building is set back 12 feet 6 inches from the lot line on either side assures permanent light for all rooms, while the wide areaways on the street front admit sunlight to the basement rooms. The building is thoroughly fireproof.

The heating system is forced hot water taken from the central plant. It became necessary, in order to heat the upper floors, the uppermost radiators of which are some 75 feet above the tallest previously existing building of the group, to install a separate system to handle the upper part of the building. This was accomplished by means of a heat exchanger placed in the subbasement and connected up to a gravity system. The two systems operate as a one-pipe down feed, with single control valves on each radiator connection.

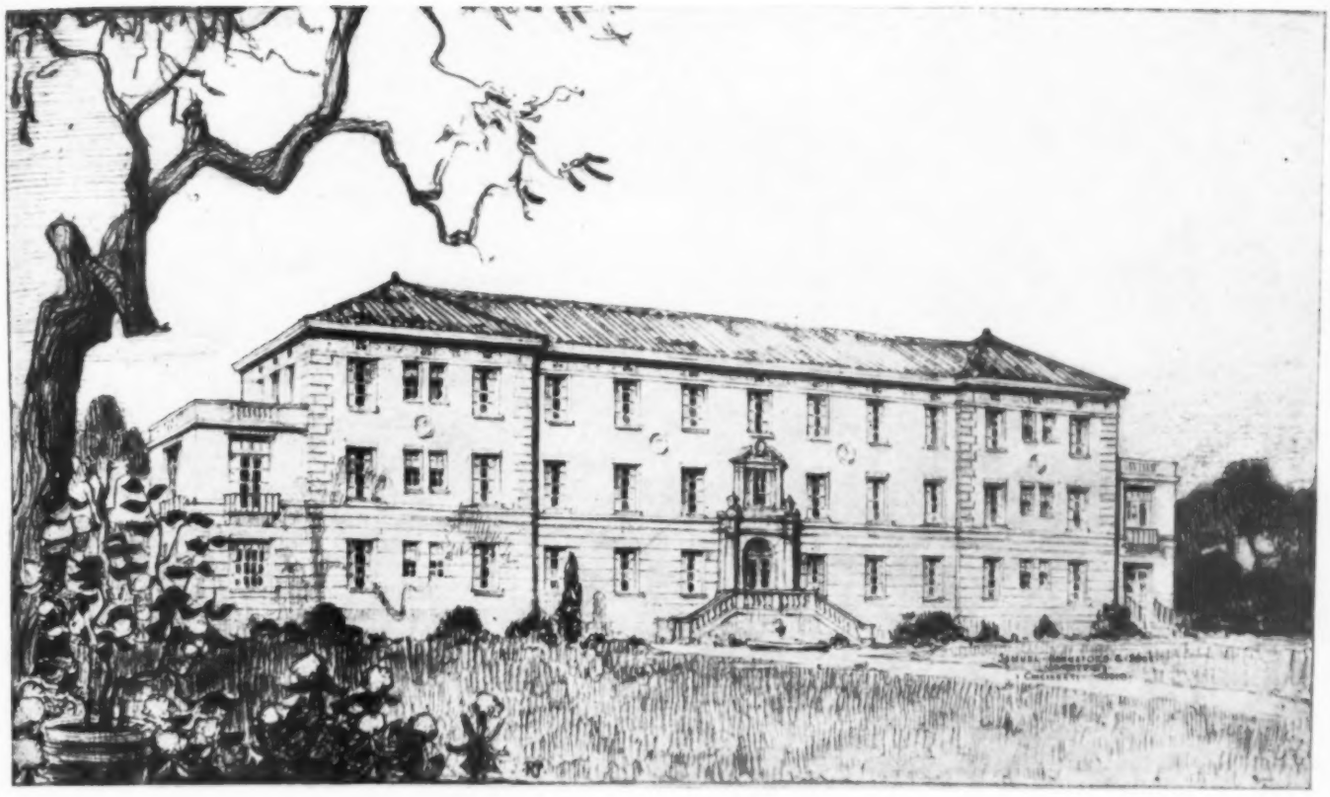
The sanitary system operates as a standard gravity job, with all fixtures vented. The fixtures in the subbasement are connected to an electric ejector outfit while a sump system cares for the subsoil drainage.

Two Water Fountains on Each Floor

The water supply systems, hot and cold, are taken directly from the loop system installed in the existing buildings, the pressure on which was increased properly to supply fixtures on the uppermost floors. The cooled drinking water is installed as a separate system, with cooling tank and circulating pumps located in pump room in subbasement. The drinking water in general is piped to two fountains on each floor, as well as to drinking stands in the dining room and serving counters.

The seventeen buildings of the hospital have their own power plant, but electric service for this building is furnished by a New York company, with switchboard in the subbasement from which feeders are run to distributing panels.

The elevator installation consists of four outfits, two passenger and one freight, running from subbasement to the fourteenth floor, and one freight from service entrance to the subbasement, one of the passenger elevators being equipped for dual operation.



Outlining the Standards for the Duke Hospital Program

By H. ELDRIDGE HANNAFORD
Samuel Hannaford & Sons, Architects, Cincinnati

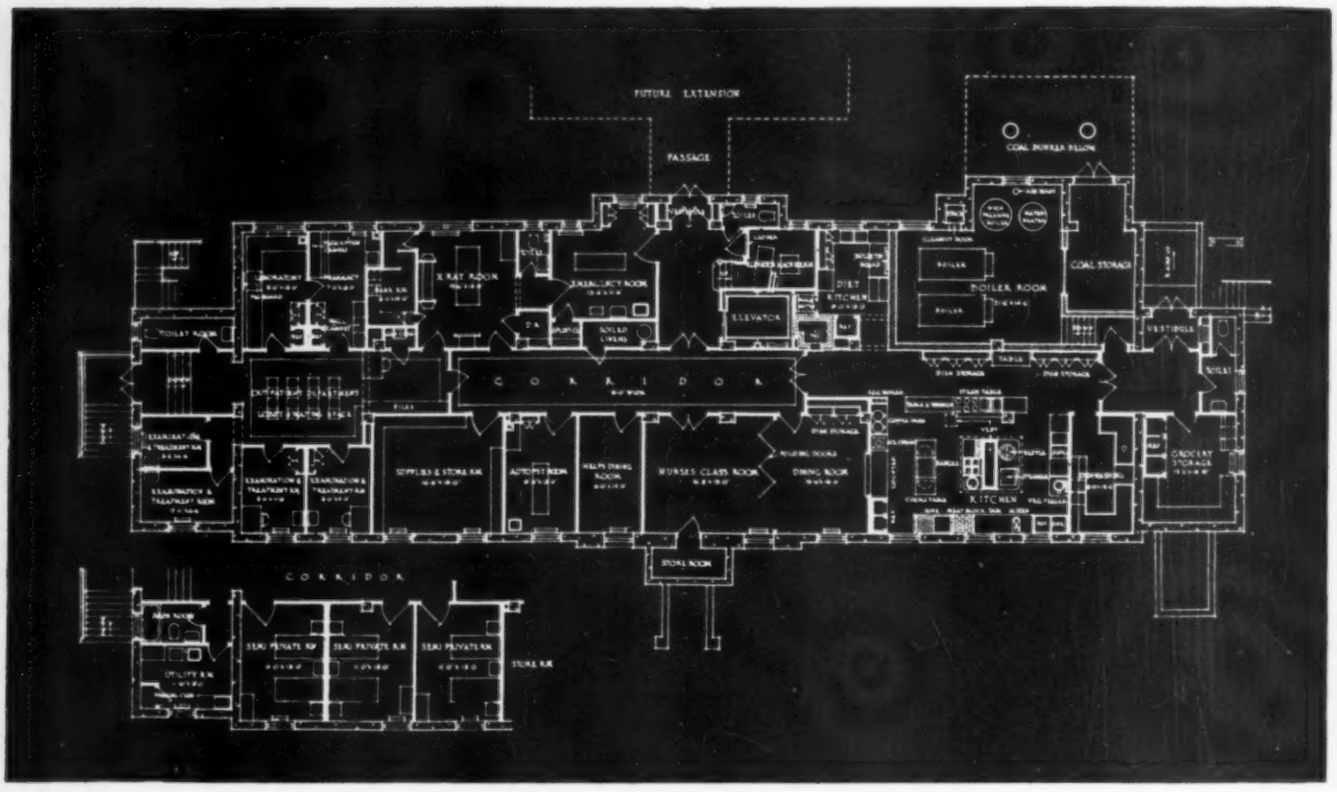
IN THE 1928 edition of THE MODERN HOSPITAL YEAR BOOK, I have endeavored to cover this subject of the Duke Endowment's hospital program from the broader viewpoint of the general requirements and the basic factors of planning and location of units. That article gives an outline of the scheme as a whole, but does not go into particulars as to the types of construction, materials, finish and equipment of the standard units, which will be discussed here.

Only fireproof construction has been considered for these units. All walls are of incombustible materials such as concrete, brick or stone; columns and floor construction are of reinforced concrete or concrete-encased structural steel; partitions are of hollow clay tile, gypsum slabs or solid plaster. All open wells in the construction, such as openings for stairs, elevators and dumbwaiters, are enclosed and have their openings cut off with kalomein or hollow metal doors. All electrical work is run in metal conduits and all furrings or chases are made of metal lath and plaster or other incombustible materials. Roofs are of slate or tile, when pitched, and of composition when flat.

The exteriors shown here are merely suggestive. No attempt has been made to dictate a standard exterior, as it is felt that this would be highly undesirable and would seriously hamper the architect in charge of the building of each separate hospital. The suggested exteriors are illustrative of the general principle that the façade should be pleasing through its logical expression of the plan, its proportions, fenestration and contrast of materials, rather than through the introduction of ornamentation, elaborate color schemes or other effects designed merely to catch the eye.

The basement floor is primarily designed as a service and out-patient floor. Here are located the boiler room, main kitchen, main diet kitchen, dining rooms, storerooms, autopsy room, emergency receiving unit and the diagnostic and out-patient department.

The boiler room is a self-contained unit within the building; in which are housed the heating



Basement floor plan.

plant and other mechanical equipment for the building. In addition to the main heating boilers, there has been provided a small high pressure boiler which will service the sterilizers and kitchen equipment during the months that the heating plant is not in service. Here also are located the hot water heater, pumps and other mechanical equipment. Coal is delivered to the boiler room and ashes are removed from the outside.

At the same end of the building as the boiler room are the main kitchen and main diet kitchen, with their storage dependencies. All stores and supplies are received through a separate entrance, which connects directly with the storerooms and kitchen department.

The kitchen department has floors of quarry tile, with white glazed tile wainscots around walls. All equipment has been carefully arranged and is set up on sanitary tile bases six inches high. The ranges, steamers and kettles have been grouped in the center of the main kitchen, and a large vent canopy provided over the whole group to take off the fumes and steam from the food. Along the outside wall of the kitchen have been placed the necessary sinks, tables, meat block, counters and other accessories required for the proper preparation of food preliminary to cooking; also those needed for clean-up work after meals have been served. Service counters have been provided for the serving of all food to tray cars, and also for cafeteria service to the personnel.

Food from the main kitchen is served into tray cars and sent to the proper destination on the elevator. Special diets are prepared in the main diet kitchen and sent by dumb-waiter to the various floor service pantries.

It is proposed to use the central service system in preparing and distributing all meals, as it was felt that this system was not only efficient but also had the advantage of centralizing responsibility with the dietitian. The dining rooms for the hospital personnel are next to the kitchen and are served from the cafeteria counter.

Emergency Room Equipped for Operations

Ambulance and emergency cases are received through the rear central entrance and may either be sent to the proper floor by the elevator, or cared for at once in the emergency room to the right of the ambulance entrance. The emergency room is fitted out as an operating room with tile floor and tile wainscots in a soft steel gray color, and has its own sterilizing and scrub-up equipment as well as its own instrument and dressing cases, so that the room can function as an independent surgical unit if necessary.

The remainder of the basement floor is taken up by the diagnostic and out-patient department. This department is arranged to function as an independent unit but is also available for the use of patients within the hospital proper.

Out-patients enter this department through the

private entrance at the end of the basement and come at once into a waiting room where their history is taken and where they await their turn for examination or treatment. Off the waiting room are four small rooms fitted up as examining rooms and treatment rooms. On the opposite side of the waiting room are the laboratory and pharmacy. These two units are for the use of the hospital proper as well as for the out-patients, but it was felt that they should be adjacent to the out-patients so as to serve this department as well. The laboratory and pharmacy are fully equipped with counters, sinks, lockers for large containers of chemicals, supply cabinets, prescription cases and refrigerators. All equipment is set on sanitary bases and heads of cases are furred in flush with the walls.

X-Ray Available for O. P. D.

The x-ray department is so placed as to be available to the out-patients and the hospital proper. It is also in direct connection with the emergency room.

On this floor particular attention has been given to planning for the various types of traffic, so as to prevent conflict and crossing of out-patients, ambulance cases and supplies.

The first floor is given over to the public waiting room, administration department, white ward patients, with services, an independent and self-serviced colored section and living quarters for the superintendent.

The visiting white public and the white ambulant patients enter the building at the central front entrance opening on to the main waiting room. This room has a terrazzo floor, paneled walls and an ornamental plaster ceiling. The color scheme is cheerful and presents a hospitable and domestic appearance.

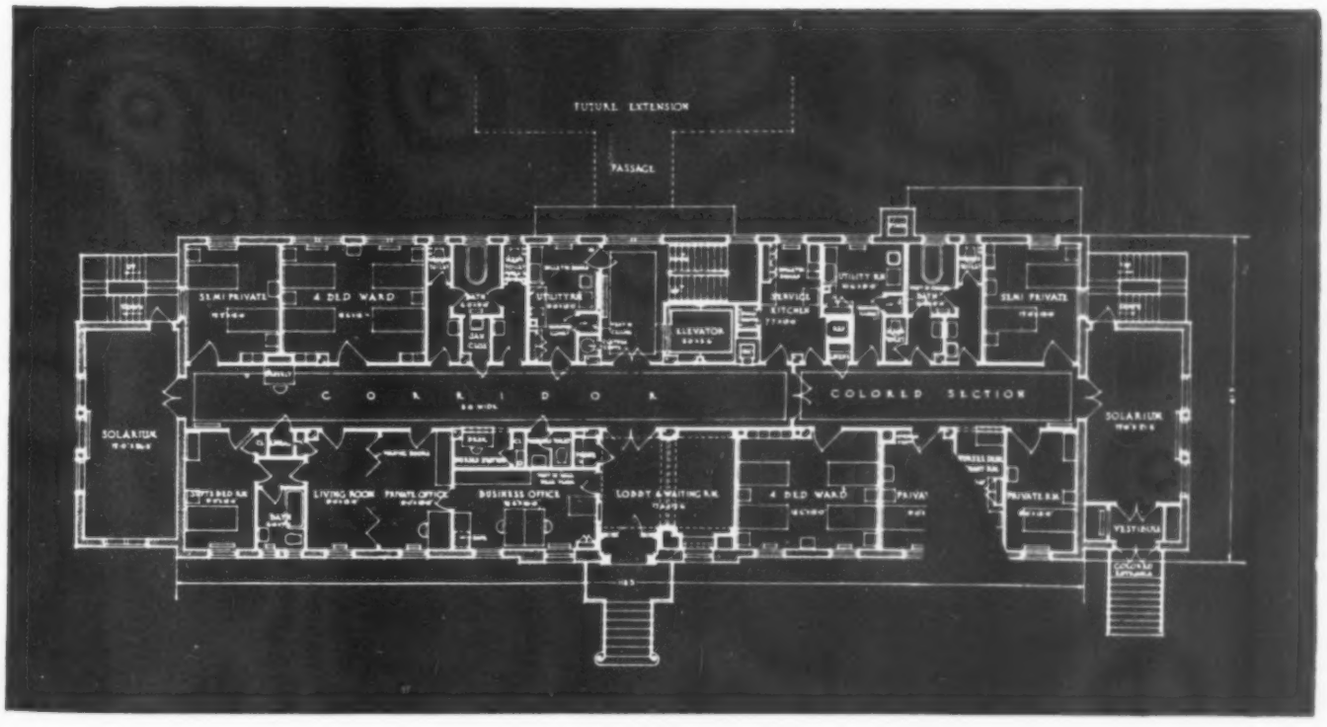
To the left of the waiting room is the general business office and next that are the superintendent's living quarters. Across the corridor from the administration department are a two-bed and a four-bed ward for white patients, with their necessary service dependencies.

The opposite end of the first floor is arranged as a section for colored patients. This section has its own separate entrance, and accommodates eight patients—four ward, two semiprivate, and two private. These rooms have their own service dependencies, and the section is arranged to function separately, insofar as practicable.

All service units have tile floors and wainscots and all equipment in these units is set up on sanitary tile bases.

It may be well to call attention to the location of the utility room near the center of the floor area. This room is designed to serve not only the present white wards but also to be within easy access of additional wards in the future extension.

All patients' rooms have terrazzo floors and base, with a special projecting base behind beds, to prevent the beds striking the walls and marring them. Corridors have bases and borders of terrazzo, with rubber tile or linoleum centers.



First floor plan

The second floor is entirely given over to patients' rooms and their service dependencies. On this floor there are twenty-one beds composed of seven ward beds, four semiprivate beds and ten private beds.

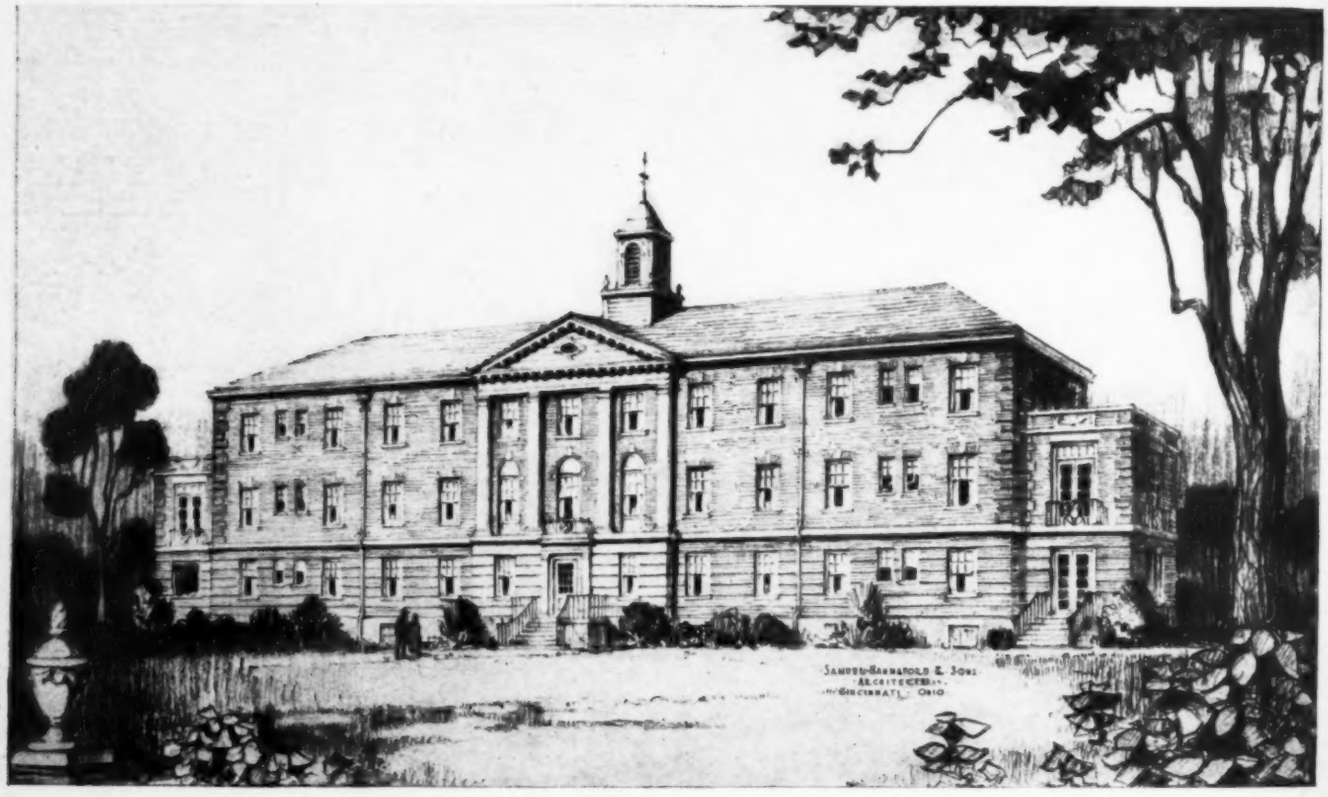
The nurse's desk and chart room is centrally placed, and controls not only the main corridor but all service units, the elevator and stairs, and the future corridor of the extension. The chart room has, in addition to the nurse's desk, a small sink and cases for narcotics and small supplies.

All service units are centrally placed so as to be nearly equidistant from the end rooms on the floor, and the utility room is so located as to be central to the rooms in the future extension, as well as central to the present rooms.

It will be noted that the end pairs of rooms are provided with private toilets and common baths. A single door can be swung from one side to the other in such a way that a private bathroom can be created for either room of each pair. These toilet rooms have the added advantage of serving as secondary utility rooms for the end bedrooms, thus reducing the service demands on the central utility room.

The floor service kitchens are designed more as service pantries than as kitchens. As already stated, it is proposed to prepare all food in the main kitchens in the basement, so that the floor service kitchens are used only for the preparation of light nourishment, such as lemonades or eggnogs. This room is equipped with a porcelain sink, wall hung electric stove, refrigerator, work counter, bulletin board and cases. Floor service kitchens are connected vertically with the main diet kitchen by the dumb-waiter.

The utility room is equipped with a porcelain pack sink, work table, supply case, utensil sterilizer, instrument sterilizer, disposal sink, warming closet, gas hot plate, bulletin board and marble shelves. Both the utility room and floor service kitchen have tile floors and wainscots; all cases are set on sanitary tile bases and the spaces over all of the cases are then furred in.

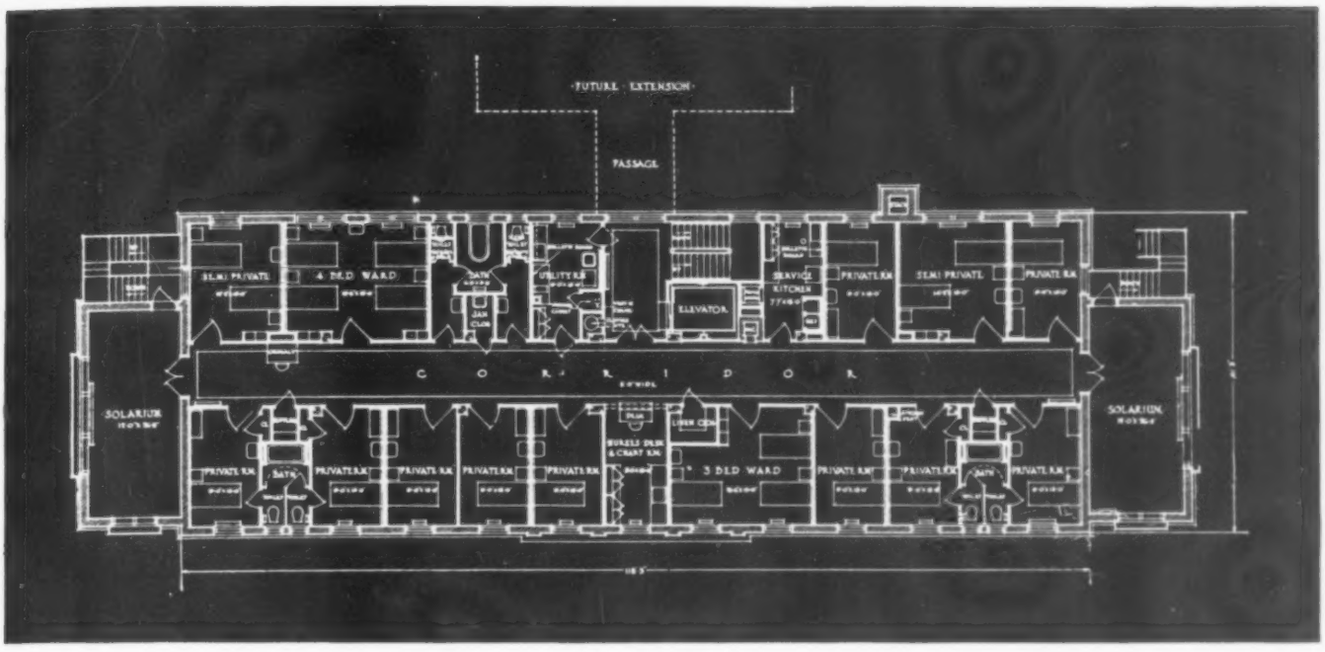


Suggested elevation No. 1 for typical small general hospital.

The linen chute and incinerator are centrally placed and open off the main corridor, thus being easily accessible to all nurses on the floor.

Patients' rooms have terrazzo floor and base with special projecting base behind the bed. Each room is equipped with a lavatory, bed, bedside table, dresser, with high hanging section at one end, large arm chair, straight chair, washable rugs and cheerful colored drapes at the windows.

Each patient's room has, in addition to the room door, a small dwarf door on the corridor side of the opening, so that the room door may be left open and the dwarf door will screen the room from view. The dwarf door is set about eighteen inches off the floor and is about 4 feet, six inches high, so that there is an open space



Second floor plan.

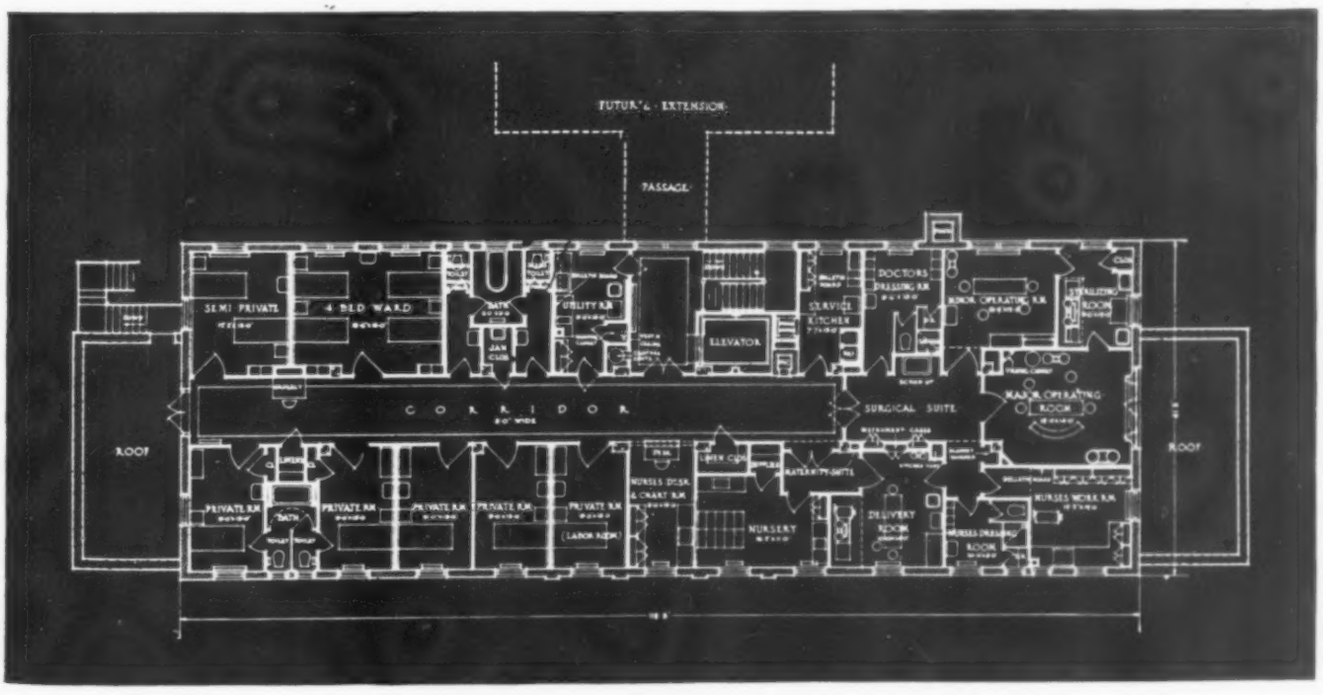
above and below the door, insuring ventilation as well as privacy.

The third floor contains patients' rooms and the surgical and obstetrical section. One-half of the floor area is given over to eleven patients' beds with their necessary services, the arrangement being the same as on the second floor.

The surgical suite consists of a major and minor operating room, with sterilizing room between, a nurses' work room and dressing rooms for doctors and nurses. The doctors' scrub-up is in an alcove near the two operating rooms. Instrument cases and blanket warmers open off the private surgical corridor and are close to the operating rooms and the nurses' work room.

The obstetrical suite consists of a delivery room with its own sterilizing unit and supply and instrument cases; also a nursery which contains all essential services and supply cases.

In hospitals as small as those under consideration, it is not economically practicable to establish a separate obstetrical suite, but the obstetrical unit on the third floor is entered through a separate entrance and is to all intents and purposes



Third floor plan.

isolated and independently serviced. The door communicating with the surgical suite is designed merely for the convenience of the doctors and nurses who attend the patient in the delivery room.

The operating rooms, delivery room and sterilizing room have gray tile floors and steel gray, matt glazed tile wainscots, seven feet high. Sterilizers have vented hoods over them to remove steam and heat.

All equipment is set up on sanitary bases of tile or terrazzo, and the spaces over the heads of cases are furred in.

The architects' aim in planning each unit has been to give the maximum efficiency at the minimum of expense. All units have been carefully considered from the standpoints both of initial cost and future maintenance expense.

All units have also been planned with the idea of adaptability in mind. Just how the feature of adaptability has been handled, is fully discussed in the article in THE MODERN HOSPITAL YEAR BOOK referred to at the beginning of this article.

A complete set of drawings and details for the various hospital units, supplemented by a printed text have been prepared in booklet form by the trustees of the Duke Endowment and issued as their Bulletin No. 3, for the use of southern communities contemplating a hospital development.

When Hospitalization Is Unnecessary

It is probably true, as stated by Dr. Chas. H. Mayo, that fully 90 per cent of all sickness does not actually require hospitalization, says the *Journal of the Indiana State Medical Association.*

This is particularly true of the sickness of patients belonging to the self-supporting middle class who live in the smaller towns and in the country, owning their own homes or renting homes that have all the modern conveniences. It may be that city dwellers in flats, where a three-room or four-room apartment has to do service for eating, sleeping, bridge, and entertainment of all sorts, are almost forced, through lack of house room and conveniences, to go to a hospital when sick, but for the most of those belonging to the great middle class, in Indiana for instance, such an emergency is not as common.

It probably is also true that a large number of people who could be taken care of in their homes when sick are encouraged by the attending physician to go to a hospital, not because of real necessity but because of the convenience to the physician.

Likewise, if sick persons are cared for in the home there is too great a tendency to require the services of a trained nurse, when perhaps a practical nurse or even a sensible attendant without training or experience in nursing could answer all of the requirements. Even when the patient goes to the hospital there is frequently shown a tendency on the part of the physician and even the hospital management to encourage the employment of a trained nurse at six to eight dollars per day.

Cements for Emergency Repair

Hospital superintendents, particularly those connected with outlying institutions are frequently called upon to make emergency repairs and the following suggestions for homemade cements will be of value:

Freshly prepared curd from soured skim milk is mixed intimately with one-fourth its bulk of lime, which has been slaked by adding just enough water to cause it to fall to a powder. This cement, which is good for wood, marble, metals, and glass, should be used immediately as it soon sets to a hard mass. When used on marble or wood, it is advisable first to paint the surface with a solution of casein (curd) in borax solution or ammonia, to fill the pores.

Powdered and sifted quicklime mixed to a paste with white of egg quickly sets to a hard cement that can be used on ivory, marble, glass or porcelain.

How to Make Waterproof Cement

A waterproof cement for cisterns or casks, is made from glue, mixed with one-fourth its weight each of boiled linseed oil and red ocher. The glue is soaked and melted in as little water as possible and the other ingredients are then thoroughly mixed in. The cement should set in two or three days.

Powdered whiting or air-slaked lime mixed with hot glue will adhere to wood and metals. Liquid glue containing acid should not be used.

Litharge and glycerine mixed to a paste form a cement that adheres strongly to metals and glass. It is not softened by heat and resists the action of water.

Beeswax and rosin melted together in the proper proportion for the desired consistency form a cement that will adhere strongly if applied to warm metal or glass surfaces. It may be mixed with whiting to give it more body.

Shoemakers' wax and shellac melted together at not too high a temperature give a more tenacious cement than the preceding. The metal or glass to be cemented must be hot enough just to melt the cement. By changing the amount of shellac from one-half to two and one-half or three times the weight of the wax the resulting cement will vary from moderately ductile to quite hard and brittle form.

An excellent aquarium cement is made by mixing ten parts each by volume of litharge, fine sand, and plaster of Paris and one part of powdered rosin with enough boiled linseed oil to make the mixture somewhat stiffer than ordinary putty. The aquarium can be filled with water in three or four days, even though the cement may not have set hard.

Rubber cement is made by dissolving crude rubber in gasoline or benzene (benzol). Other ingredients, such as dry mineral fillers, gums, or resins, are sometimes added to adapt the cement for particular purposes.

In cementing two rubber surfaces together they should first be thoroughly cleaned with gasoline. This is absolutely essential to secure satisfactory adhesion. If the surfaces of the rubber are very smooth, they should be roughened slightly with sand-paper and again cleaned. A small quantity of cement is then spread over each surface, and after allowing a few minutes for the major part of the solvent to evaporate, the two surfaces are stuck together and kept under pressure for several hours to give the solvent time to evaporate completely.

An Example of Flexibility in Planning a Large Institution

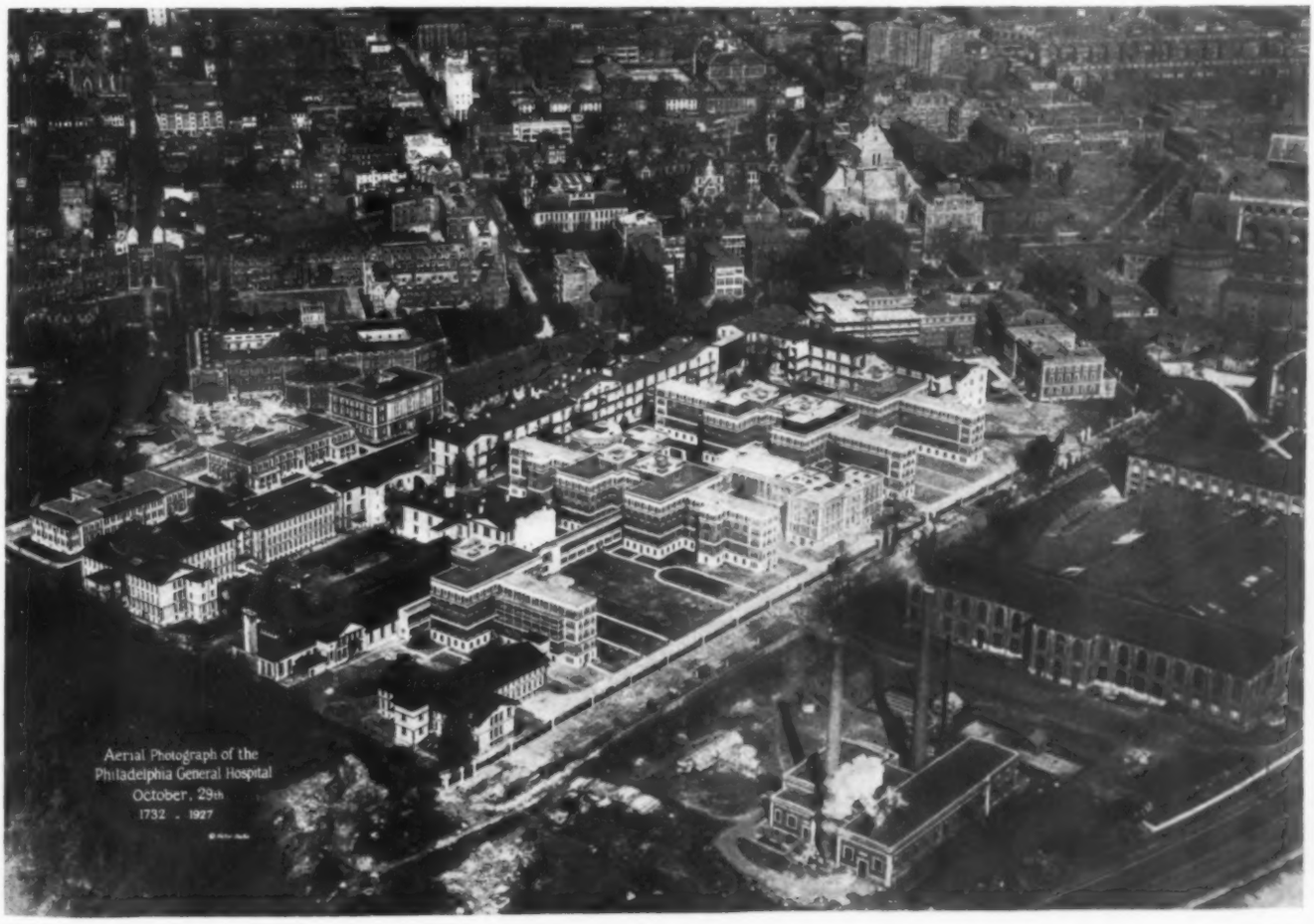
By PHILIP H. JOHNSON
Architect, Philadelphia, and
JOSEPH C. DOANE, M. D.
Medical Director, Philadelphia General Hospital, Philadelphia

THE medical history of the Philadelphia General Hospital, Philadelphia, may be said to date back to the year of the birth of the "Father of His Country"—1732. In that year the inhabitants of the little town of Philadelphia decided that it would be necessary to make some provision for the physical care and medical treatment of the indigent, should they become ill. The old Philadelphia almshouse came into being as a result of this decision. Attached to this institution was an infirmary, which could not have consisted of more than a few beds.

This infirmary of almost two hundred years ago was the precursor of the Philadelphia General Hospital of today, which, when the new buildings are completed, will house 2,600 patients.

The site of this institution has been occupied for the past ninety-seven years by buildings that housed the physically and mentally ill and the indigent. In the past eight years all of the mentally ill, with the exception of psychopathic patients undergoing study and treatment, and all of the indigent were removed from these buildings. Now, only the Philadelphia General Hospital remains.

The building program of this institution has been developing in a desultory way for the past ten years. During the past four years a great spurt has been made in pushing forward this program. Most of the buildings shown in the accompanying aerial photograph of the hospital were constructed within the past three years.



Airplane view of the new Philadelphia General Hospital, Philadelphia, showing the general plan and arrangement of the buildings, which are of the semidetached type.

In order to prepare for the extensive building program, which is the subject of this article, it was necessary to construct buildings elsewhere for the care of patients who were mentally ill.

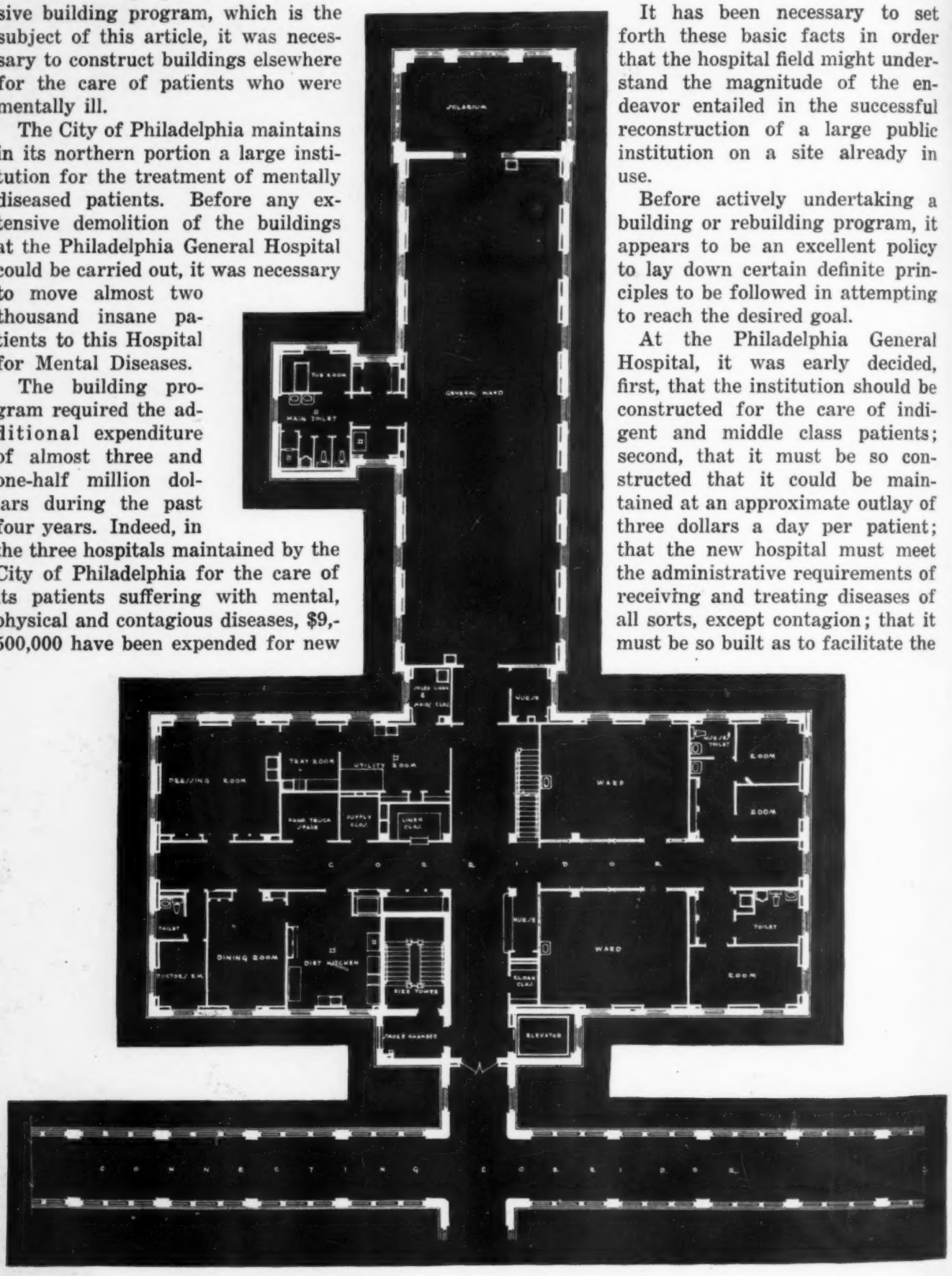
The City of Philadelphia maintains in its northern portion a large institution for the treatment of mentally diseased patients. Before any extensive demolition of the buildings at the Philadelphia General Hospital could be carried out, it was necessary to move almost two thousand insane patients to this Hospital for Mental Diseases.

The building program required the additional expenditure of almost three and one-half million dollars during the past four years. Indeed, in the three hospitals maintained by the City of Philadelphia for the care of its patients suffering with mental, physical and contagious diseases, $9,500,000 have been expended for new construction since the year 1924.

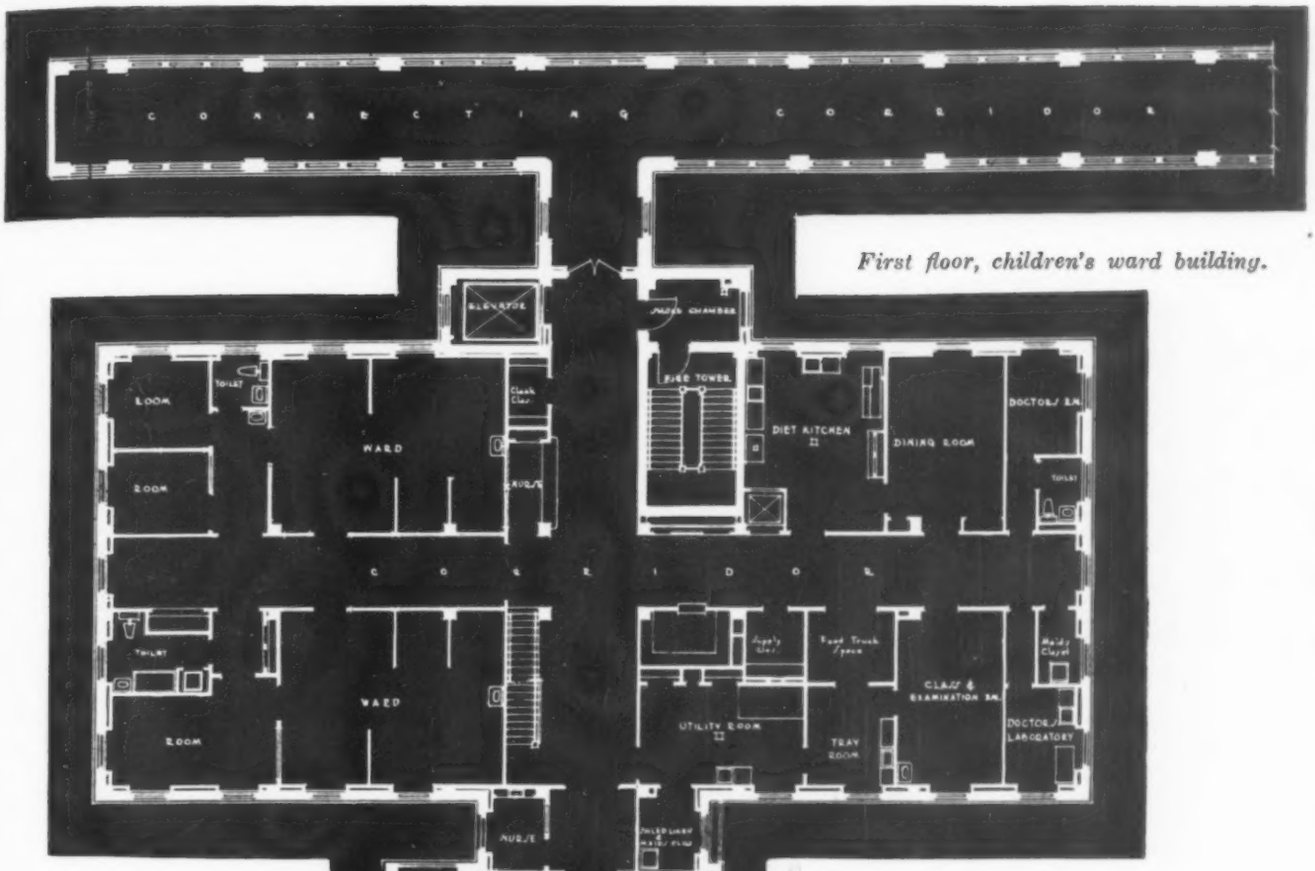
It has been necessary to set forth these basic facts in order that the hospital field might understand the magnitude of the endeavor entailed in the successful reconstruction of a large public institution on a site already in use.

Before actively undertaking a building or rebuilding program, it appears to be an excellent policy to lay down certain definite principles to be followed in attempting to reach the desired goal.

At the Philadelphia General Hospital, it was early decided, first, that the institution should be constructed for the care of indigent and middle class patients; second, that it must be so constructed that it could be maintained at an approximate outlay of three dollars a day per patient; that the new hospital must meet the administrative requirements of receiving and treating diseases of all sorts, except contagion; that it must be so built as to facilitate the



First floor plan of men's surgical ward.



First floor, children's ward building.

ease of administration of units consisting of large groups of patients; that the construction must be fireproof, substantial and not extravagant.

In order to meet the above requirements, plans were prepared from which were excluded all ultramodern features, which, while desirable, were not considered essential to the successful treatment of disease and which would be expensive to maintain. The ward units were so planned as to facilitate to the greatest degree the work of the doctors and nurses. It is a notorious fact that in most institutions there is a shortage in the nursing personnel. The ward unit was so planned, therefore, that there would be the utmost economy of effort on the part of the nurse, so that her services might be of the greatest good to the largest number of patients.

In 1924, before the last phase of the comprehensive building program of Philadelphia's city hospital was entered upon, the following new buildings had been constructed within a period of one half dozen years, and were already occupied:

A clinical laboratory, costing, when equipped, $500,000; a power plant, costing almost one million dollars; a residence for medical personnel; an addition to the nurses' home; a building for housing male and female attendants and a building for housing women suffering with tuberculosis.

It will be seen, therefore, that the construction of this institution did not necessarily begin without substantial utilitarian hospital accommodations having already been provided. The building to be described, therefore, consist almost entirely of accommodations for the

rather intensive treatment of acutely ill patients.

The general plan and arrangement of these buildings is that of the semidetached type. It will be noted from the accompanying illustrations that six five-story buildings are arranged along a corridor, which consists of two inclosed stories and an open deck. In order to provide flexibility, these buildings are arranged in pairs, four of which are connected by an inclosed corridor at each floor. It is therefore possible with this arrangement to provide against the evil so often seen in detached hospital buildings, of overcrowding in one unit while many beds remain unoccupied in another.

Centrally placed with respect to the ward units, will be found the administration building, four stories in height, across the main service corridor. Directly behind this is a two-story building, containing operating rooms, an x-ray division, a teaching amphitheater and a central work and sterilizing plant for the preparation of gauze articles of all sorts.

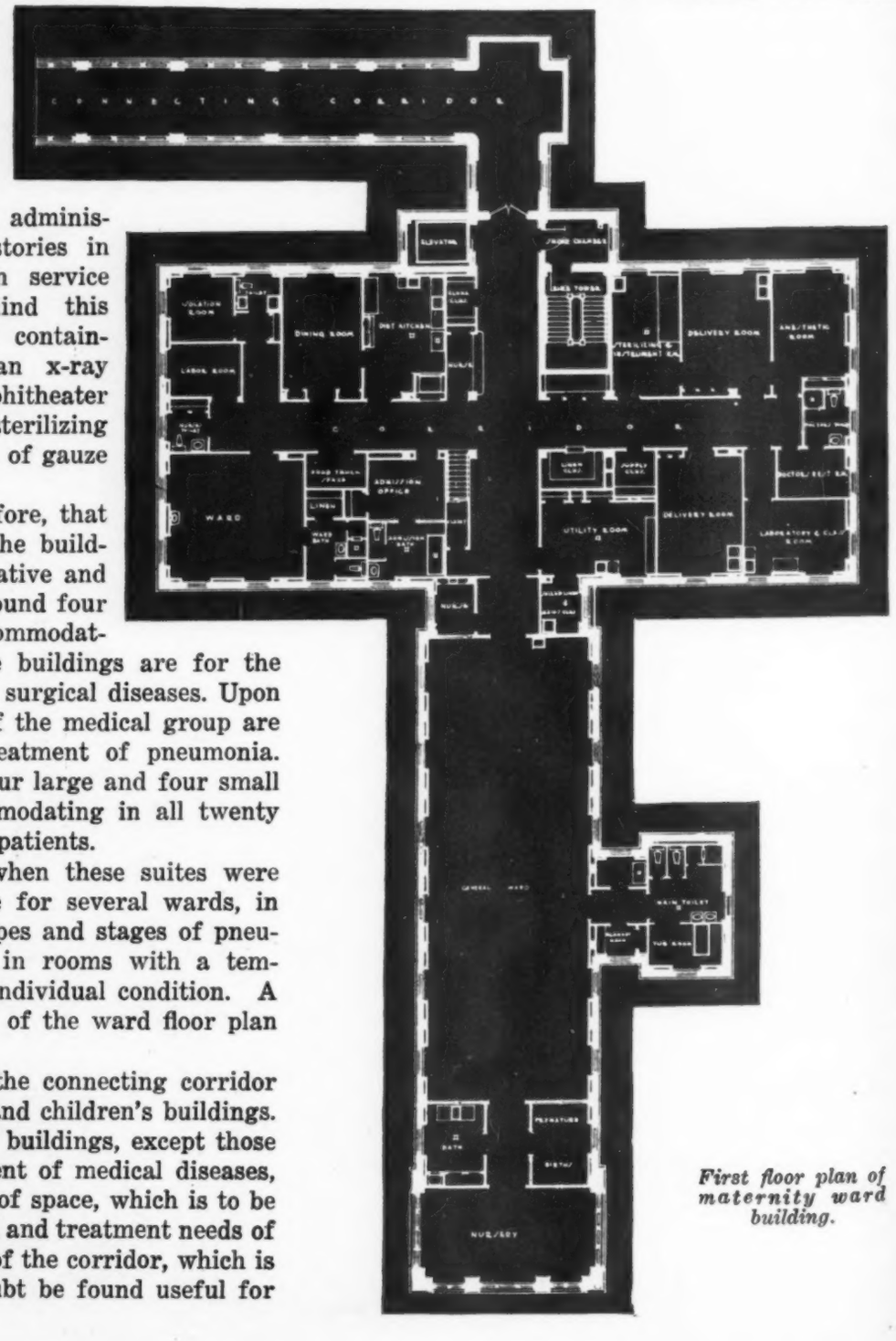
It will be noted, therefore, that closely grouped around the buildings providing administrative and operative facilities, are found four buildings, capable of accommodating 800 patients. These buildings are for the treatment of medical and surgical diseases. Upon the sixth and top floor of the medical group are found wards for the treatment of pneumonia. These suites consist of four large and four small wards, capable of accommodating in all twenty male and twenty female patients.

It was the intention when these suites were being planned to provide for several wards, in order that the various types and stages of pneumonia might be treated in rooms with a temperature suitable to the individual condition. A more detailed description of the ward floor plan will be given below.

At the extremities of the connecting corridor are found the maternity and children's buildings.

On the top floors of all buildings, except those given over to the treatment of medical diseases, will be found extensive roof space, which is to be devoted to the recreational and treatment needs of patients. The open deck of the corridor, which is 810 feet long, will no doubt be found useful for meeting the same needs.

In the administration building, which is T-shaped, are admission facilities for ambulatory patients, the hospital drug store and a closed ambulance drive, which is at the junction of the long with the short bar of the T. Here is placed a carefully planned accident and receiving division. This suite contains waiting rooms, doctors' and nurses' offices, clothes and supply closets, bathrooms, six examining rooms and dressing rooms, as well as rooms for the isolation of cases of possible contagion, or for the observation for a short period of patients suffering from head



First floor plan of maternity ward building.

injuries. The long bar of the T of this building connects directly with the service corridor, and this point represents the geographical center of the new hospital development.

On the second floor of this building will be found the main hospital lobby, the office of the medical director and superintendent, the school for nurses, the social service department, the hospital clinical library, telephone office, information desks and dental clinic.

Personnel Housed on Third Floor

The third floor is given over to the housing of female nonnursing personnel, such as anesthetists, occupational therapists, dietitians and x-ray technicians.

The long bar of the T houses the institutional auditorium, which seats 500 persons.

On the fourth floor are to be found rooms for other female personnel, particularly those who occupy assistant administrative positions.

It will be noted from the floor plans that there was adopted a more or less routine arrangement of rooms on each floor of every building. This was done with the idea of facilitating the administration of the hospital units. There was employed also a more or less standardized arrangement of service and utility rooms throughout the whole construction. In each building accommodations for approximately forty-five patients are to be found on each floor. Flexibility in the separation of patients was sought by arranging for a large ward of twenty-five beds; two smaller wards of eight beds each; one ward of two beds and two single rooms.

Nurses' Utility Room on Each Floor

These wards are roomy, with twelve-foot ceilings. They have four-foot windows with ventilating sash, each window being eight feet high. On each floor is to be found a nurses' utility room, ample in size, in which are sterilizers and blanket and solution warmers, with liberal closet space; a tray room, in which will be stored sterile trays for minor medical surgery; a classroom for teaching purposes; a small floor laboratory; a visiting physicians' office; a kitchen and dining room for patients; a nurses' station, as well as toilets and linen rooms.

In the large ward, the well tried plan of a toilet tower, at an equal distance from each end of the ward, was employed.

Bedpan sterilizers, urinal racks, and a specimen refrigerator are to be found in two small rooms at either side of the short corridor that leads to the toilet tower. This plan or an adaptation of it is more or less uniform throughout all of the new buildings of this hospital.

The ground floor of each building houses the out-patient department, in which will be treated cases corresponding to the type housed on the upper floors of the same building. It has been found that efficiency is encouraged when the physical and administrative distance between the out-patient and in-patient service is reduced to a minimum.

The out-patient floors are divided by glass and wooden partitions into rooms suitable in size for the type and amount of work to be performed.

Roof Equipped as Playground

In the children's building a milk room of ample size is on the ground floor, while a pediatric dispensary, two schoolrooms and a gymnasium are found on this same level. The roof of this building is to be equipped with swings, slides and other playground apparatus.

Arrangements have been made to treat 250 patients in the children's hospital. This building is divided into the following units: infectious (vaginitis); surgical, children up to one year; medical, children from two to twelve years. Each one of these groups is assigned to a separate floor. A porch, sufficient in size to receive all floor ward beds and cribs, is on the southwest side of this building.

On the ground floor of the medical building are the metabolic and cardiologic divisions. Here are to be found experimental and routine laboratories, electrocardiographic suites, metabolic and cardiologic out-patient departments, with diet kitchens and classrooms.

The new hospital is constructed of tapestry brick, with limestone trimmings. The ground floor is of Indiana limestone. The buildings are fireproof throughout, with metal window casements and door frames. The buildings are of frame-bearing construction. As has been noted above, the windows are eight by four feet, with polished plate glass of one-quarter inch thickness. The windows are of the ventilating type. There is not a dark, unventilated room in the whole construction, with the exception of certain linen rooms and storerooms. The hallways are unobstructed at both extremities, to permit free ingress of air and light.

Floors Are Mainly of Terrazzo

The floors are of terrazzo, with certain exceptions, such as in the x-ray division, where rubber has been used, and all rooms devoted to living and administrative purposes, where rifted pine has been employed. In the main hospital lobby, the floor is of terrazzo, with decorative borders.

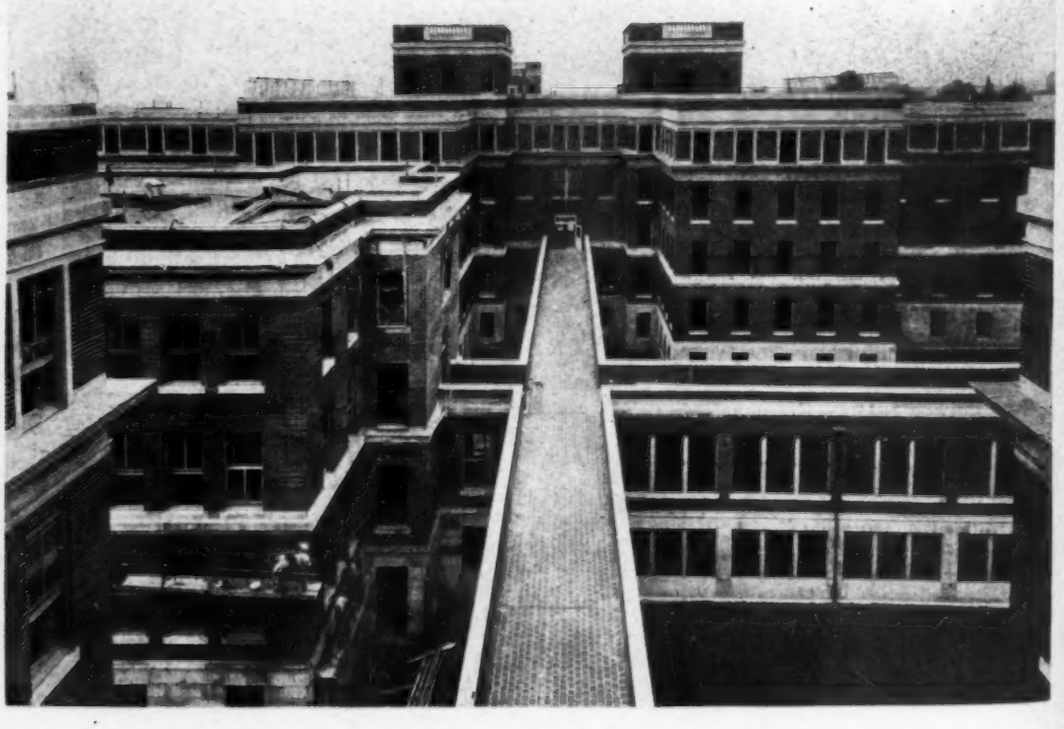
A cove base has been placed in all wards, to prevent marring of walls. In the inside partitions and doors wired glass has been used.

The hospital kitchen and the refectory for employees are at the end of the service corridor. Here, food for over two thousand persons is prepared, and is transported by means of electric trucks, in heat-containing boxes, to the ground floor of each building, where it is delivered to the various floor diet kitchens by means of a dumb-waiter.

It is the intention in administering the above new buildings to assign to main departmental groups, such as medicine and surgery, an assistant medical director and a supervisory nurse, who will be in reality the administrative officers over this group, almost in the same degree as if these buildings constituted an entirely separate hospital.

There is a limit to the size of departmental units that can be efficiently administered as a whole. These groups should not exceed 350 or 400 beds if satisfaction is to be attained.

Philadelphia General Hospital is one of the few hospitals that provide a separate residence for interns.

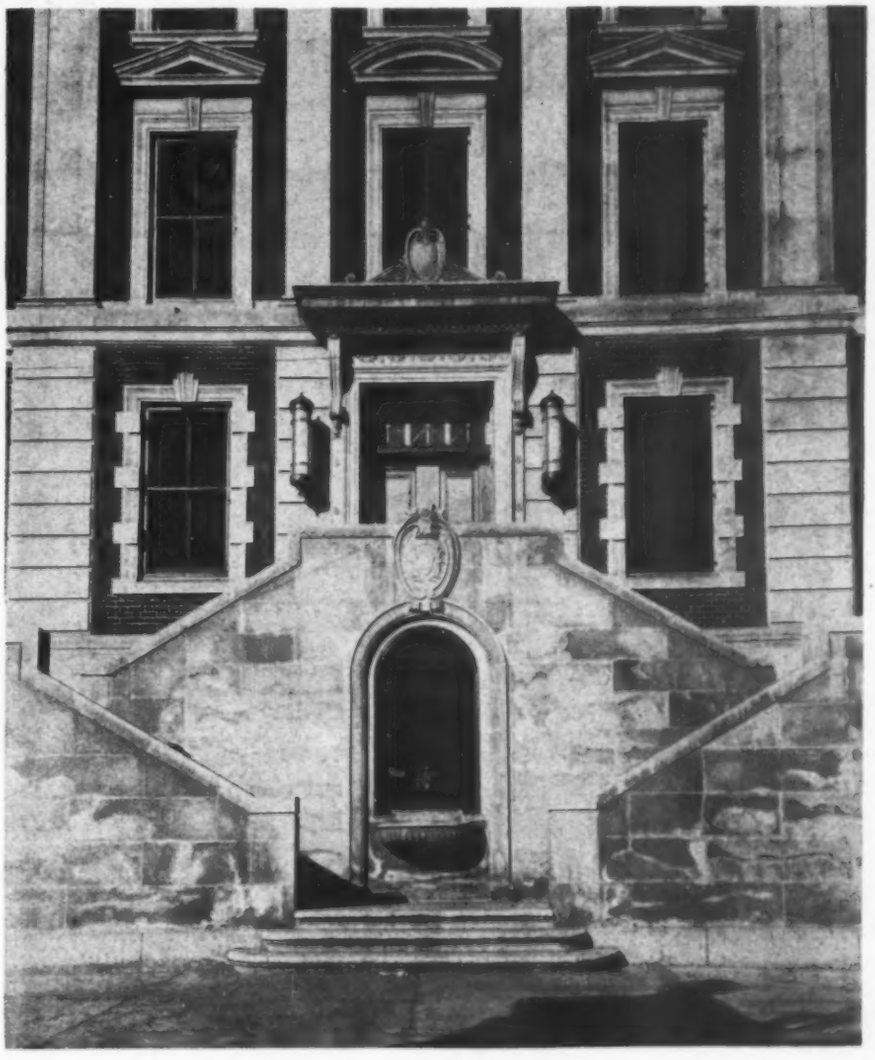


The view on the right shows the arrangement of hospital buildings and sun deck of corridors connecting buildings.

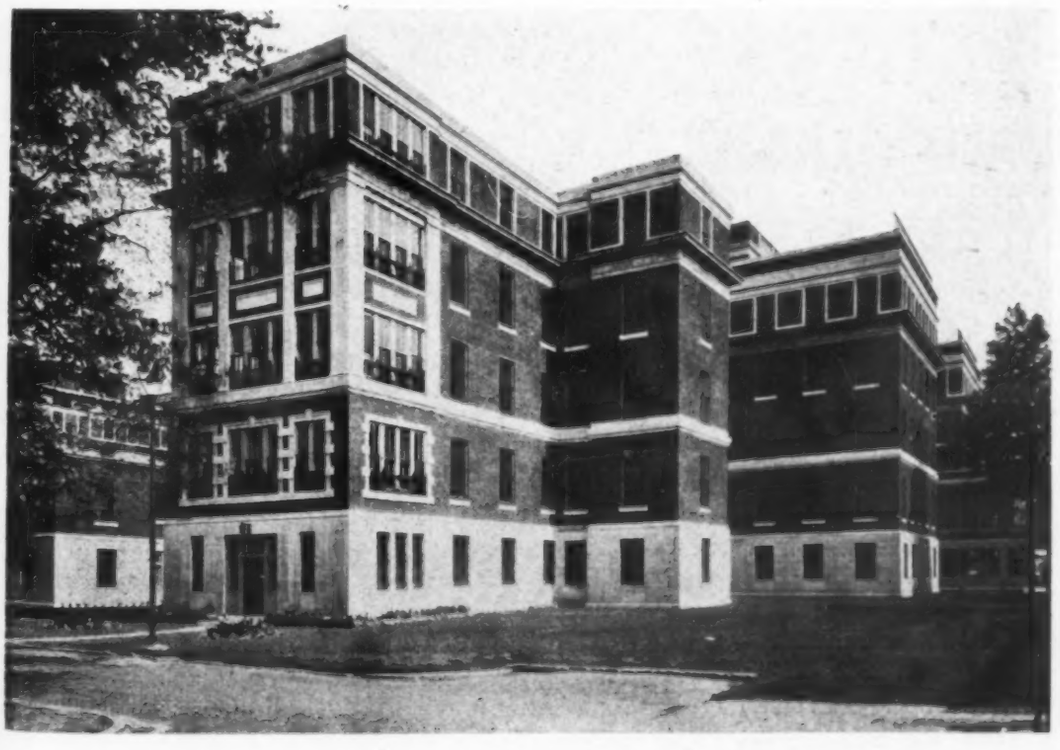
It is the intention to treat only acutely ill patients in these buildings, the chronic type to be cared for in the old buildings, after these have been renovated and remodeled in such a way as to make them suitable for this purpose.

The cost of the construction was about $3,500 per bed. This included the construction of six ward buildings, as well as a building for the housing of the surgical operating suite and the x-ray division. The cost per cubic foot was sixty-two cents. The administration building cost $750,000, and approximated seventy-five cents per cubic foot.

It is impossible in so brief a descriptive article as this is to depict the details adequately, or even, in some instances, the more important features of so large a construction. The major features, however, have been described, leaving the details until interested readers may visit the hospital, and learn about them in person. Such visits would be welcomed by the medical director and superintendent of this institution.



Above is shown the entrance to the administration building, which is T-shaped and four stories in height.



On the left is a rear view of the medical building, showing the sun parlors. On the ground floor are the laboratories.

Rockland State Hospital Has Unique Features

By SULLIVAN W. JONES
State Architect, New York

THE new Rockland State Hospital, now under construction, in Rockland County, New York, consists of forty-three buildings and when completed will cost approximately $11,000,000. It is designed to house a maximum of 4,800 patients.

Perhaps this is the first hospital of such size to be built completely at one time. There are several hospitals as large as Rockland and a few larger, but they have grown as the result of overcrowding and piecemeal construction, always with the hope that the old, obsolete buildings might be abandoned and demolished. Nowhere, however, has new construction kept pace with the increasing demand for patient beds, and everywhere old buildings that are a disgrace to the communities owning them, are still in use. Fire seems to be the only effective agency for enforcing replacement.

Rockland State Hospital is unique in many respects. It has been designed as an industrial plant should be designed, to perform a specific function with certain predetermined "load" or demand factors. The construction of this great modern institution, and the two years of research that preceded construction and made possible a scientific approach to the problem of design and the exact determination of the factors involved, were some of the results of the $50,000,000 bond issue urged by Governor Smith as the only practical means by which the State of New York could meet the demand for new hospital construction, accumulated through twenty years of procrastination and neglect.

Not only is Rockland State Hospital, in itself, a complete functioning unit, but it is also a properly designed part of the larger mechanism of hospital service throughout the state, which, under the present construction program, is being brought into geographic and numerical balance with the population.

The site for the hospital comprises 640 acres of fertile land in the Hackensack Valley. It falls gently from east to west to the river, but is generally level from north to south. The exposure is excellent, although the outlook does not compare with some of the older state hospitals. The acreage will eventually have to be doubled to provide sufficient land for the production of crops indispensable to the economical operation of the hospital, and to provide occupation for the able-bodied, industrious male patients.

That the State of New York should deliberately set about the design and construction of a mental hospital of the size of Rockland, when psychiatrists generally advocate the small hospital, is perhaps the first feature calling for an explanation.

The size of a public hospital for the mentally ill is an economic as well as a medical question. And it may well be that economic consideration

outweighs the medical. We have plotted curves showing the rate at which the cost of construction per bed decreases as the number of beds increases, and showing also how the cost of operation per patient decreases as the number of patients increases, both up to an established maximum limit.

The argument for a small hospital advanced by the medical profession is based upon the established fact that when the number of patients goes beyond 1,000 or 1,200 the superintendent loses personal contact with the cases under his care. When that condition develops it is bad for the patient, and hospitals are run for the benefit of the patient.

The limitation with regard to size would be removed, however, if it were possible to get a really competent medical personnel under the superintendent. And at this point the medical considerations take on an economic aspect because the medical staff could be expanded almost without limit if the scale of pay for medical services were raised sufficiently to be inviting, and if suitable housing for the doctors and their families were provided.

Rockland State Hospital will either strengthen or shatter the case for the small hospital. It is my firm conviction, and the conviction of my medical consultants, that there will be less difficulty in operating Rockland, and that better results will be obtained, than with many much smaller institutions.

Size Does Not Limit Efficiency

There is no doubt that within reasonable limits scientific designing can effect economies and simplify problems of administration to such an extent that the large institution may equal or better the "ideal" small institution in affording the patient adequate treatment and service. In certain phases of hospital administration, mere size is, of course, in no way an obstacle to efficiency. It requires no greater executive ability to operate a power house and heating plant for a hospital of 5,000 patients than for a hospital of 2,000. This is true of practically the whole of what may be called the purely physical side of hospital administration, as distinct from the directly curative work of the medical staff.

By way of illustration, there can be no argument but that the purpose of a passenger train is to carry passengers safely and comfortably from one point to another within a given time. There may be room for much difference of opinion as to whether there should be one porter or two on duty in each Pullman car, how many waiters are necessary for satisfactory service in a dining car, and what kind of service is satisfactory. But there can be no argument over the fact that one locomotive can as readily haul five Pullmans as it can two. In either case the locomotive has one engineer and one fireman and the train has only one conductor, though he may need more train men. Whether there are two cars or five in the train can make no material difference in the comfort or safety of the individual passenger. Thus in the purely physical side of hospital administration, such as the power house, laundry and kitchen, size does not present any new or difficult administrative problem. It merely means enlargement of the administrative staff and a proportionate increase in the number of employees.

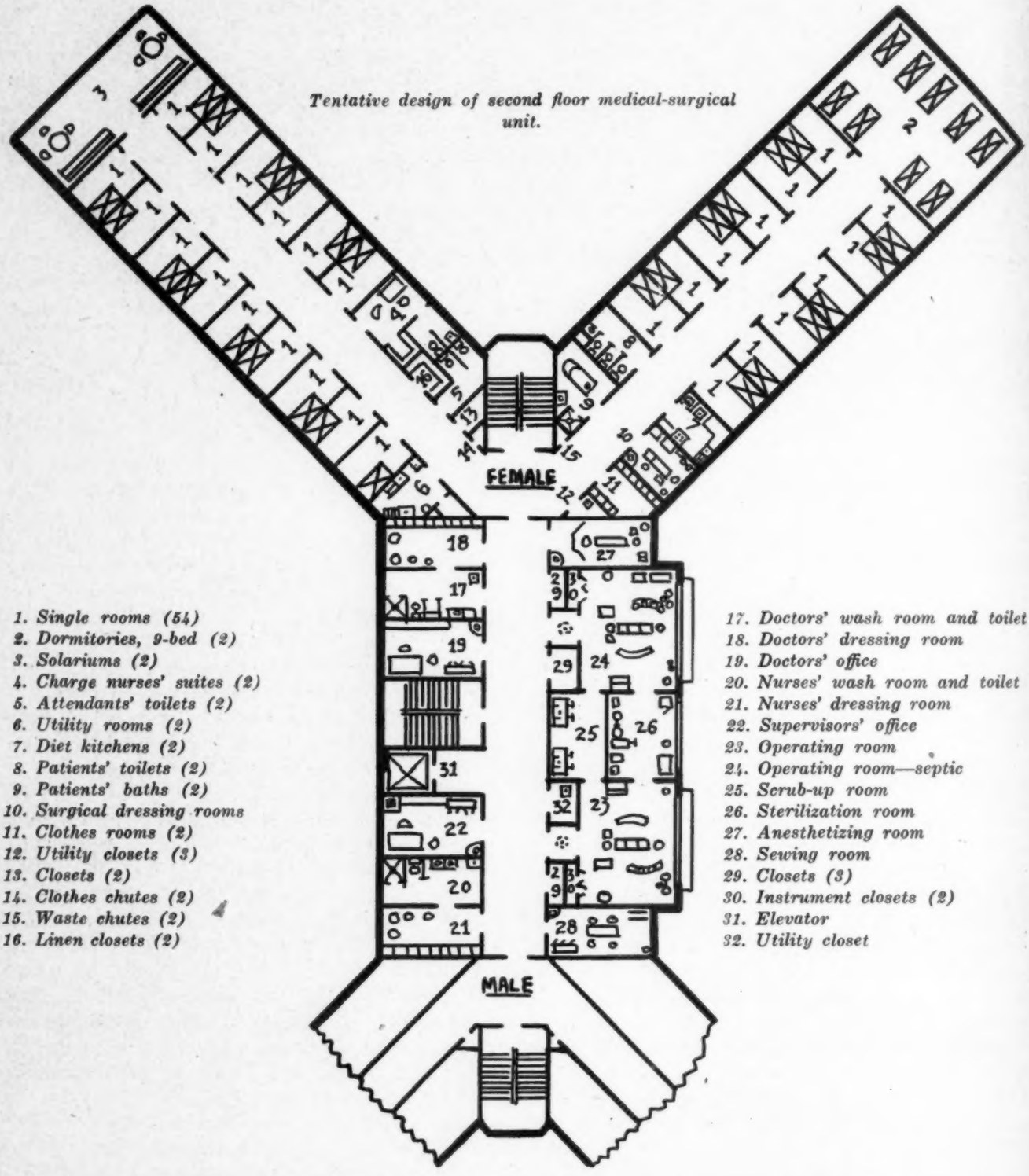
Laundry Provides Employment for Patients

But this analogy must not be carried too far. For instance, I have mentioned the laundry as a part of what I called the physical side of hospital administration. This rule, however, does not apply to the laundry of a hospital for the mentally ill because it has been found that the laundry may be made a valuable agency for occupational therapy. Consequently in designing the laundry for Rockland State Hospital we have discarded in a great measure experience in designing commercial laundries. The ideal commercial laundry reduces man power and lost motion to a minimum. The hospital laundry which is to play its part in occupational therapy necessarily has but little scientific relation to the commercial laundry. Here it is necessary to provide employment for as many patients as possible.

A properly designed hospital must not be misused; it must not be made to defeat, in part, its purpose. For instance, the single room is an absolute necessity in the effective treatment of certain types of mental disease, but in the older state institutions it has been impossible to follow out this line of treatment in a considerable number of cases. The single rooms were, for the most part, capable of holding two or three beds, and two or three beds invariably have been placed in them because superintendents have been unable to resist the pressure for admission to already overcrowded institutions. In this new hospital we have made it impossible for this pressure to affect the treatment of those cases requiring isolation. The single rooms are of such size and shape that there is no space for a second bed. Thus while the hospital is designed for 3,800 beds minimum and 4,800 maximum, there is no possibility of putting two patients in a room designed for one.

Before any attempt was made to design the Rockland State Hospital, more than two years were devoted to studying the operation of the hospitals in New York and many other states so that

Tentative design of second floor medical-surgical unit.



1. *Single rooms (54)*
2. *Dormitories, 9-bed (2)*
3. *Solariums (2)*
4. *Charge nurses' suites (2)*
5. *Attendants' toilets (2)*
6. *Utility rooms (2)*
7. *Diet kitchens (2)*
8. *Patients' toilets (2)*
9. *Patients' baths (2)*
10. *Surgical dressing rooms*
11. *Clothes rooms (2)*
12. *Utility closets (3)*
13. *Closets (2)*
14. *Clothes chutes (2)*
15. *Waste chutes (2)*
16. *Linen closets (2)*
17. *Doctors' wash room and toilet*
18. *Doctors' dressing room*
19. *Doctors' office*
20. *Nurses' wash room and toilet*
21. *Nurses' dressing room*
22. *Supervisors' office*
23. *Operating room*
24. *Operating room—septic*
25. *Scrub-up room*
26. *Sterilization room*
27. *Anesthetizing room*
28. *Sewing room*
29. *Closets (3)*
30. *Instrument closets (2)*
31. *Elevator*
32. *Utility closet*

intelligent determinations could be substituted for conflicting individual opinions.

As the result of these researches it was found that there were three main functions to be performed: first, that of rehabilitation, including medical, occupational and physical treatment; second, the scientific custody of the permanently defective, and third, the operation of the utilities making possible the performance of the two functions first named.

By studying the statistics on first admissions to the state hospitals we determined what became of the patients after they were admitted, how they were classified and how long each class, on an average, remained in the institution. By studying the results of treatment, that is, the product of the first function to be performed by the hospital, we reached conclusions in regard to the average length of time that a patient first admitted should remain under intensive medical

treatment in order to produce the largest possible percentage of cures. We found that maximum results were obtained within the period of nine months. At the end of that period, the patient had either been cured and released, or sufficiently improved to be paroled, had died, or had been conclusively diagnosed as a chronic. We found that facilities for intensive treatment in the various state hospitals provided for the care and treatment of first admissions for periods varying from three days to a year and a half.

Doctors Give Hearty Cooperation

In making all of these studies we received the whole-hearted, enthusiastic cooperation of the doctors on the construction committee of the state hospital conference. Our approach to the problem was new to them and it took time and explanation to get them to understand what we were driving at. But when they did realize that the things they had been accustomed to discuss with the architect—flooring materials, types of windows and window guards, keying systems, operating room equipment and the kind of faucets for the lavatories—were all of secondary importance, they asked, "Why hasn't this kind of a study been made before?"

In the same way we reached determination with respect to the size that an institution ought to be. We found that the admission rate should be governed by the discharge rate; or, to state it positively instead of negatively, that the size of the institution should be fixed by the admission rate. By way of illustration, if you have a reservoir from which 1,000 gallons evaporate each day, and you pour into that reservoir each day more than has evaporated, it will overflow. In the state hospital the "evaporation" is the combination of discharges and deaths, and the "overflow" is provided for by overcrowding and by the transfer of patients to other hospitals where the "evaporation" is in excess of the normal supply. We found that the average annual release, by death or otherwise, from a state hospital for the insane was about 20 per cent of the population of the institution, so that Rockland is designed for the admission of approximately one thousand patients a year.

All of the institutions of the state tested upon the basis of these determinations were found to be wholly out of balance. Not only were the institutions out of balance, the whole state was out of balance. Under the circumstances, the wonder is that the hospitals and the hospital system have operated as well as they have. For this the credit belongs to the superintendents who have struggled continuously to overcome the difficulties of keeping in operation an imperfect piece of machinery.

These researches, and determinations of functions and processes and turnovers which they made possible, led logically to the standardization of types of buildings for specific purposes. That does not mean that we have standardized the architecture, but we have standardized the processes to be performed within the building, and such standardization leads inevitably to a standardization of facilities and functional relationships in plan. These studies have been carried to the point now where if we are told the admission rate for a new institution, the institution rolls itself out automatically behind that rate.

The Rockland State Hospital as now developed and in process of construction comprises buildings and groups of buildings that naturally fall into the following segregations: first, major hospital units; second, hospital accessories; third, utilities; fourth, quarters for staff and employees.

There are four major hospital units for patient occupation. First, and most important, the psychopathic unit or group, with a capacity for 700 patient beds; second and third, two continued treatment groups of 1,500 beds each, normal capacity, and fourth, a medical-surgical unit, with beds for 150 patient inmates.

Among hospital accessory units may be enumerated administration building, general laboratory, isolation unit, two buildings for occupational therapy, building for hospital industries and a combined amusement hall, gymnasium and chapel.

Listed with the utilities are power house; general storehouse and cold storage; root cellar with vegetable preparation annex; laundry; bakery; repair and maintenance shop; fire apparatus house; garage and salvage sheds and yard.

What Personnel Quarters Include

The quarters necessary for housing the 1,000 to 1,200 paid employees include a superintendent's residence, six, four and five family apartments for physicians' residences, with a seventh group for steward and engineers, nurses' homes of fifty beds each, homes for single employees of 100 beds each, homes for married employees of twenty-four apartments each, together with cafeteria buildings providing separate services for nurses, office help and the mechanical force and a nurses' training school.

The psychopathic hospital or reception service, the key unit of the institution, consists of four three-story ward buildings grouped about a central pavilion, and service towers that contain dining halls. This unit or group contains twenty-four wards in which there are 300 single rooms

and eighty dormitories, with a maximum of five beds per dormitory. Within this unit are provided space and facilities for reception service, where the admission cases are examined and assigned for further observation, or to a room or ward in the hospital; space and facilities for a complete diagnostic clinic, including dental, x-ray and eye, ear, nose and throat laboratories and operating rooms; space and facilities for physiotherapy, hydrotherapy and electrotherapy, with all known and approved modern apparatus, as well as generous batteries of continuous flow baths for treatment of those acutely disturbed.

Each of the 1500-bed continued treatment groups comprises four two-story ward buildings of eight wards each. The thirty-two wards in each building provide 150 single rooms and 124 dormitories with a maximum of twenty beds. In the center of each such group there is a dining-room-kitchen unit, comprising patient and attendant dining rooms, kitchen and kitchen accessory annex. Facilities for treatment in the continued treatment group are far more limited than in the psychopathic hospital, but include a complete physiotherapy department for each group and a consistent quota of continuous flow baths for special ward service.

The 150-bed medical unit can best be likened to a thoroughly modern hospital for the treatment of medical and surgical cases, which one might expect to find in a thriving town or community of 10,000 inhabitants. It is merely a general hospital for the treatment of the physical ills of the patients committed for mental disorder. This unit embodies a dual operating suite of advanced design and also x-ray laboratories. The building provides on two floors 114 single rooms and four dormitories with nine beds each.

Generous Number of Single Rooms

The number of single rooms for patient inmates, nearly 20 per cent of the normal patient capacity of the institution, as well as the comparatively small capacity of the numerous dormitories, are facts at once striking and significant, and reflect radical departures in design from general practice in public institutional planning of the past, wherein dormitories of 100 or more beds were not infrequent and where the single room quota was accordingly low. This increase in the number of services, that is, the greater number of single rooms and smaller dormitories in contradistinction to large wards and dormitories, promotes a higher standard of treatment and care for the patient. It also creates an inevitable though by no means startling increase in the paid staff and employees of the institution when prorated against inmate patients. This reflected increase in the cost of operation in the item of personnel will, however, be more than offset by other operating economies that will result from careful planning.

How Patients Are Classified

An intimate survey of patient classification according to habit-condition characteristics, which, rather than the particular form of mental disorder, must serve as a basis for segregation of patient inmates, indicated that there were upwards of twenty more or less distinct class differentiations, each of which called for certain specific and generally different details for consistent housing and treatment. Such a fine classification however would prove highly impracticable as a basis for design, and five major classifications were chosen around which wards, dormitories and facilities were especially designed. These five types of wards are repeating units both for the psychopathic and continued treatment groups. Thus great flexibility in the use of patient accommodations has become one of the outstanding characteristics of the plan.

The type of construction employed is also new and the low bids received fully justified this departure from standard practice. The hospital is being constructed at a cost per bed 22 per cent lower than anything the state has been able to accomplish within recent years.

Buying for the Institution Kitchen

A paper entitled "Marketing and Menu Planning," given by M. Faith McAuley, assistant professor of institution economics, University of Chicago, before the American Dietetic Association, carries some practical suggestions that are here quoted: "The purchase of raw materials for the institution kitchen is more difficult than for any other manufacturing plant. Food materials are many, various, and difficult to standardize. The food buyer needs for a background as intimate a knowledge as possible of production, whether apples, tomatoes or rib of beef be the subject of immediate concern. Information concerning methods of distributing, whether of strawberries in January, or spinach in June, is also vital. A knowledge of the food product itself is necessary.

"Price is not an adequate basis on which to determine purchase of good materials. The factors that determine the price difference, and their effect on the quality and the suitability of a given article for a given purpose are especially significant. To buy an apple for salad or baking purposes requires a knowledge of varieties, with their characteristic qualities, and of the best season to buy them. Quality and price in the manufactured article, as, for example, in a product like macaroni, are determined by the process of manufacture and by the quality of the raw material, since these determine the quality of the finished product. Intimate knowledge of foodstuffs is essential for both buying and successful meal planning."

Practical Planning Promotes Patients' Comfort

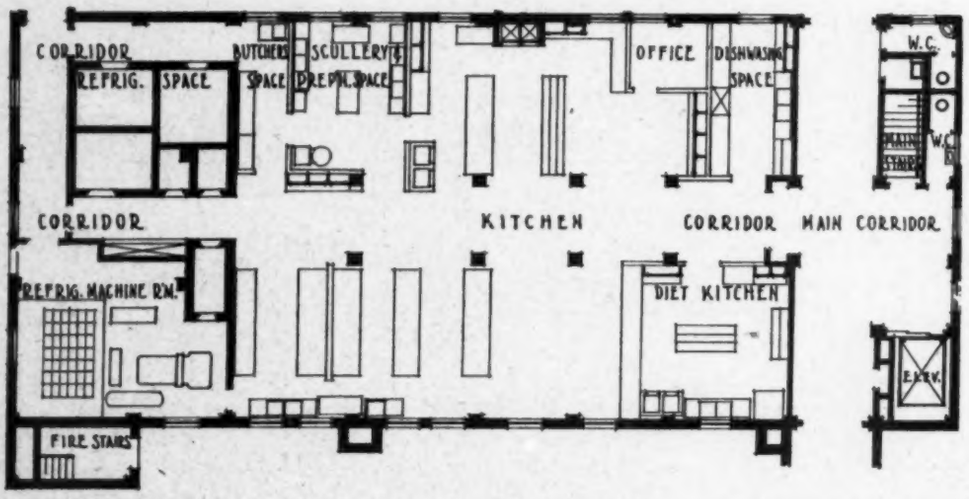
By GEORGE W. SHERER
Superintendent, Allentown Hospital, Allentown, Pa.

CONSTRUCTION of the new service building of the Allentown Hospital, Allentown, Pa., the public opening of which took place on Thanksgiving Day, 1927, was started in July, 1926. The building was designed under the direction of Dr. S. S. Goldwater, director, Mount Sinai Hospital, New York, and the architectural work was done by Ruhe & Lange, Allentown, Pa., who drew the plans for many of the buildings of the hospital group and who prepared the plans for the new patients' building, now being erected at the rear of the west wing.

The building, which is three stories in height, is in the inner court of the hospital, directly in the rear of the administration building to which it is connected by an eighty-foot corridor. Corridors also connect it with the east and west wings of the hospital. It is built of buff brick with steel frame and concrete floors, making it entirely fireproof.

The ground floor houses the hospital kitchens, the refrigerating plant and the storage coolers. The floor is laid in red tile and the walls and divisions are faced with white tile giving the whole room a bright, cheery appearance. The diet kitchen occupies the front part of the first floor and is divided from the main kitchen by a five-foot white tile partition. In this kitchen all special diets are prepared, as well as all trays for private patients. This kitchen is in charge of Catherine Xander, a graduate dietitian from the home economics department of the Teachers' College, Temple University, Philadelphia, and a

One of the wards at Allentown Hospital, Allentown, Pa.

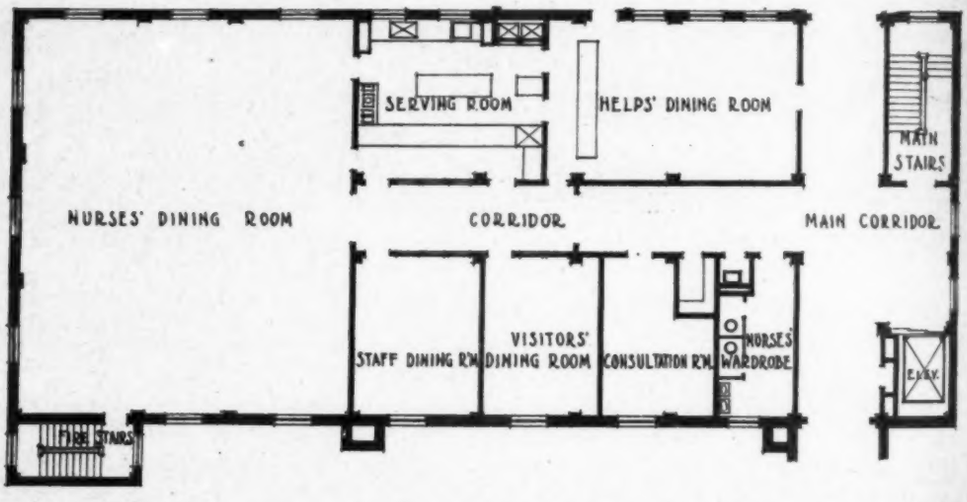


The ground floor plan of the service building, which houses the hospital kitchens, the refrigerating plant and the storage coolers.

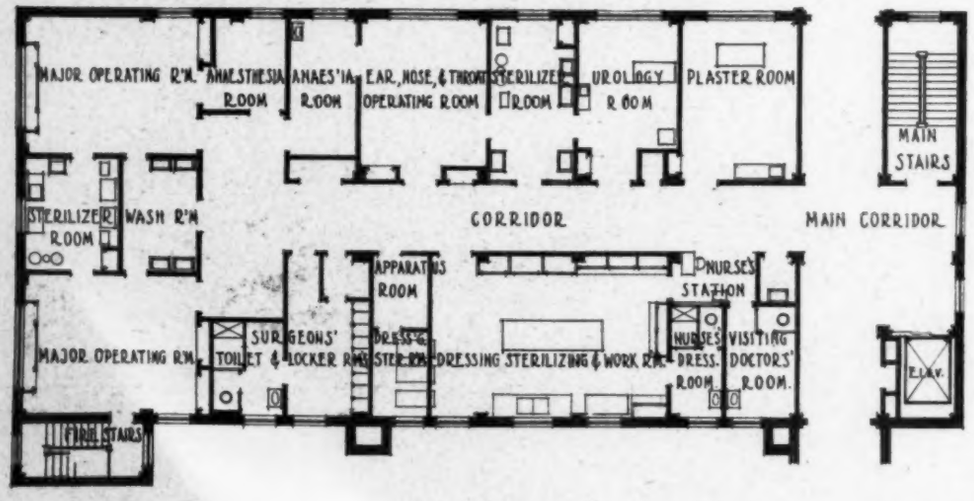
group of student nurses assist in the preparation of the food and the setting up of the trays.

The equipment of this kitchen consists of two four-burner heavy-duty gas ranges and broilers, one six-compartment solid porcelain-lined, brine-cooled refrigerator, one sixteen-foot steam heated warming cabinet and serving counter, with highly polished monel metal top. The kitchen also is equipped with work tables, tray and utensil racks and everything for a complete kitchen.

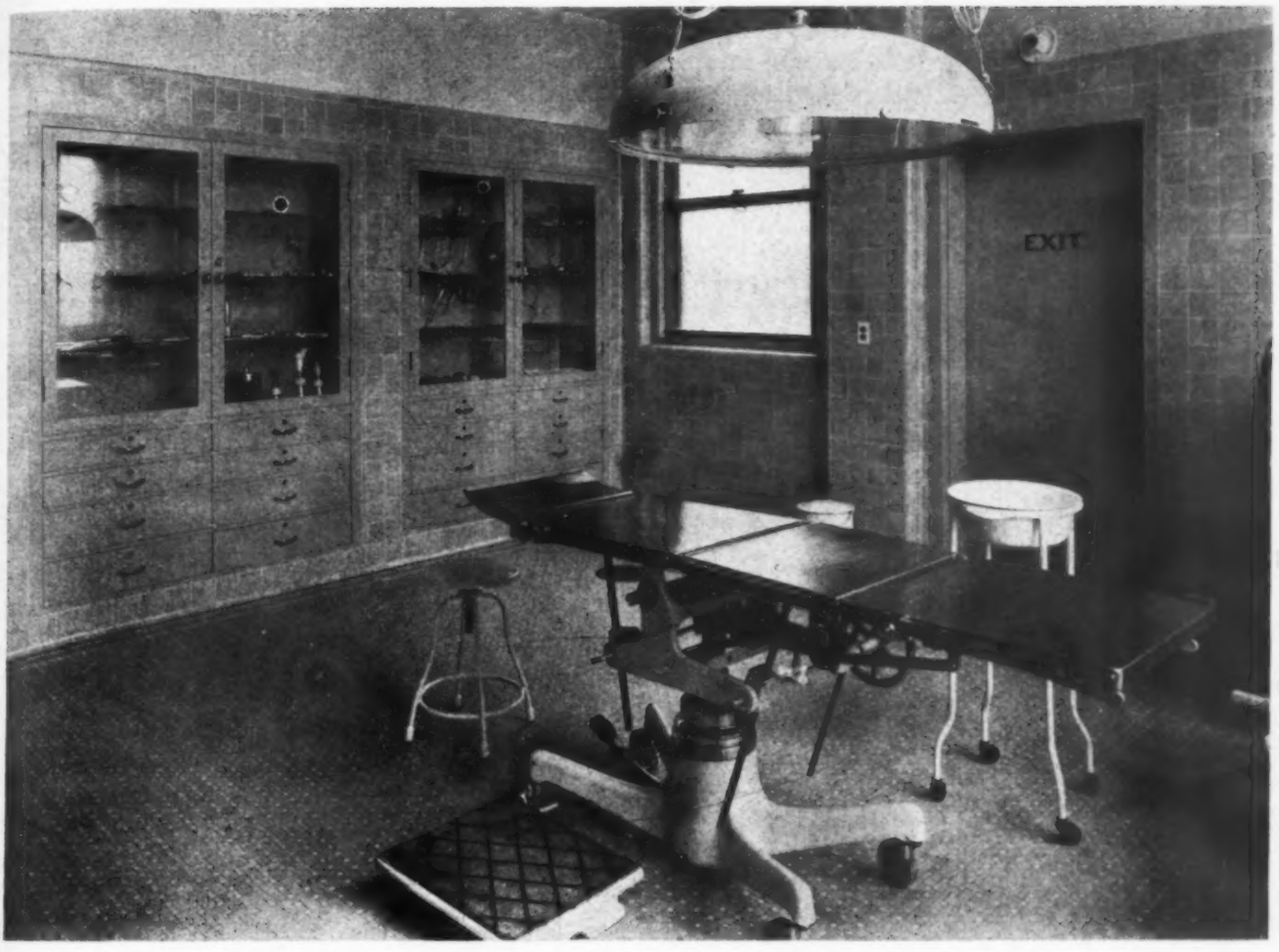
Next to the diet kitchen and the diet kitchen pantry is the large main kitchen of the hospital, which occupies more than half of the ground floor. In this kitchen the meals for the ward patients as well as for the nurses and hospital personnel are prepared. White tile walls, white enameled ceiling and full-size windows on both sides make this kitchen bright, airy and sanitary. The battery of four heavy-duty gas ranges and broiler and the steam kettles, cereal cooker and boilers are ar-



The first floor of the service building, shown on the right, is given over to dining room service.



On the second floor, shown on the left, are five large operating rooms. The major operating rooms occupy the north front.



One of the large operating rooms, with recessed instrument cabinets.

ranged under a large tinned copper canopy, to which is connected an exhaust fan that draws up all vapors, odors and heat from the stoves, making the kitchen cool and comfortable on the warmest day.

To the right of the stoves is a vegetable prepar-

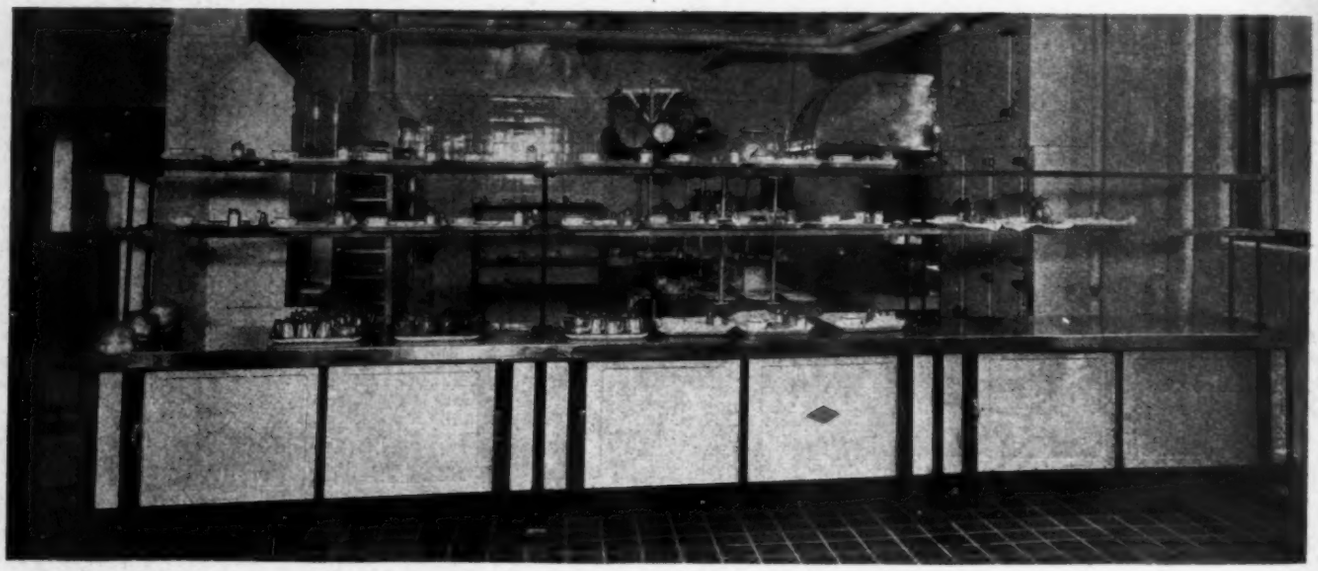
The sterilizing room, showing cabinets for unsterile dressings.

ing room. Here all vegetables and fruits are cleaned before going into the kitchen proper. Here as in the diet kitchen there is a large six-compartment solid porcelain-lined brine cooled refrigerator, for the storage of prepared food and cold dishes. The kitchen is amply provided with work tables and utensil racks, as well as with a large steam-heated serving counter, coffee urns and dish warmers. Both the diet and main kitchens are provided with ample white enameled metal cupboards.

To the rear of the kitchen and occupying about one-fourth of the ground floor are the refrigerating plant and meat, milk and vegetable storage coolers. There is a fifteen-ton refrigerating machine as well as a freezing tank capable of supplying sufficient ice for a 500-bed hospital. The hospital is a large consumer of ice, using several tons a day. The storage coolers are of ample size and are capable of holding enough perishable products, such as milk, meat, butter, eggs and vegetables, to supply the hospital kitchens for a week or longer. Here as elsewhere provision has been made for future needs. In fact the kitchens and their equipment as well as all departments in this building will capably serve a hospital of 500 beds. Mrs. Edith Butler, a graduate dietitian from the Clarkson School of Technology, Potsdam, N. Y., attends to the service for the ward patients and the dining rooms.

The first floor of the service building is given over to dining room service. Here we find the large nurses' dining room, which occupies the rear half of the entire floor, as well as the dining room for the help, the staff dining room and the special diet dining room. The nurses' dining room accommodates 150 comfortably. In this large room the student nurses, graduate staff, special nurses and office personnel are served. The furniture of this room is the gift of the junior ladies' auxiliary, and is well suited to the comfort and convenience of the nurses. To the right of the corridor leading into the nurses' dining room are the private dining rooms of the intern staff and the special diet dining room, as well as a conference room for the use of the executive and building committees. The attractive furnishings of the doctors' dining room are the gift of the senior ladies' auxiliary.

The special diet dining room marks a new departure in food service for Allentown. For a long time there has existed the need of a public dining room where people suffering from all metabolic diseases such as diabetes, mellitus, nephritis, diseases of the liver and obesity, requiring special diets, could be served with meals prepared for their particular needs.



Serving counter and kitchen, with dry trays in place.

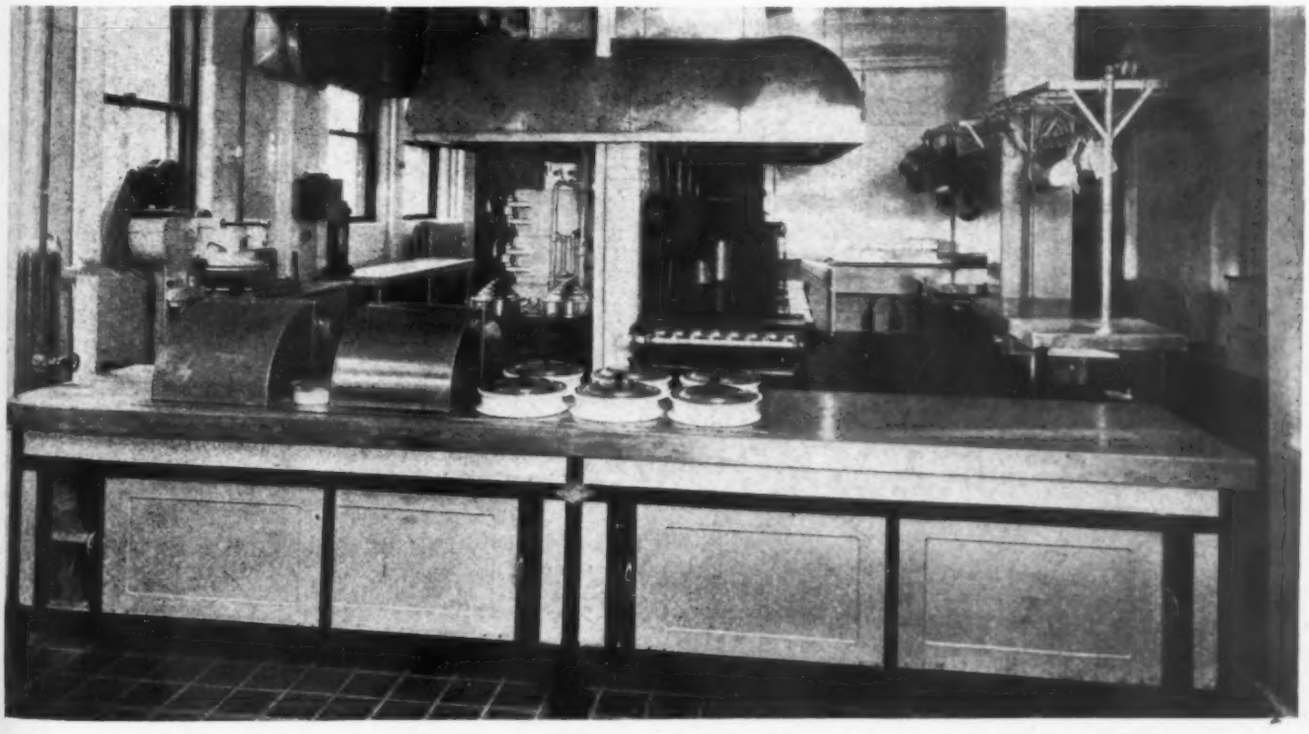
The hospital authorities recognizing this public need decided to make provision for such a service and have furnished this room for that purpose. Here special diets as prescribed by attending physicians and prepared by graduate dietitians are served at nominal prices. Arrangements for this special service can be made through the superintendent's office.

All the dining rooms are served by a special serving room to which the food is sent from the kitchen by dumb-waiters. The equipment of this room consists of a serving counter and steam table so designed that cafeteria service can be installed if desired. The flooring on this floor, with the exception of the serving room and nurses' wardrobe, is in dark gray linoleum. The walls are finished in ivory tinted egg shell enamel,

The nurses' dining room.

and the window sash and frames as well as the door trim are finished in dark brown, the whole making a pleasant and cheerful appearance.

The second floor is given over to the surgical service. There are five large operating rooms, two of which are for major operations, one eye, ear, nose and throat operating room, a cystoscopic room and a plaster cast room. The major operating rooms occupy the north front of the floor. They are placed on both sides of the doctors' scrub-up room and the sterilizing room. This arrangement enables the doctors and nurses to pass from one operating room to the other without the necessity of going into the central corridor. The plaster cast room, cystoscopic room, eye, ear, nose and throat room and the anesthetizing rooms, are on the right-hand side of the corridor in the order named. Between the cystoscopic and eye, ear, nose and throat rooms, and connecting with them, is another sterilizing and scrub-up room. On the left side of the corridor are the visiting doctors' cloak room, the clinic nurses' station, the nurses' workroom, the autoclave room and doctors' dressing room. Both the doctors' dressing room and



The kitchen showing steam table with vegetable and meat containers.

the nurses' workroom have wash rooms equipped with shower baths and lavatories.

The major operating rooms have northern exposures and have been so built as to receive the maximum amount of light. In front of the large window which runs up into the ceiling of the room there is placed a glass screen, behind which are the large radiators that supply the heat for the operating rooms. The walls of all the operating rooms are in gray tile, ranging from a light to a dark gray in color. This range of color gives a mottled effect that is extremely pleasing and restful to the eye. The floors are laid in tile of two sizes and two tones of gray, in basket weave pattern. The ceilings of the operating rooms as well as the walls and ceilings of the corridors are in ivory tinted egg shell enamel.

The nurses' workroom is modern and complete. The walls are in white tile, and on two sides of the room there are large built-in metal cabinets and closets, which provide ample storage space for the dressings and supplies needed on the operating room floor. On the north wall are the dressing sterilizers, two in number, which are of the recessed type. These sterilizers are of the latest type, and are equipped with gauges that record the actual time and the degrees of heat to which the contents have been subjected. They remove all elements of doubt and lighten the work of the surgeons and nurses who have greater confidence as fear of infection is removed.

The sterilizing rooms are equipped with water, utensil and instrument sterilizers of the latest type which are set under canopies attached to exhaust fans that carry away the steam and vapor and give indirect ventilation to the adjoining operating rooms.

The nurses' station, placed in a small alcove to the left of the corridor, enables the clinic nurse to have a full view of the corridor and the nurses' workroom and greatly facilitates the supervision of the operating room floor.

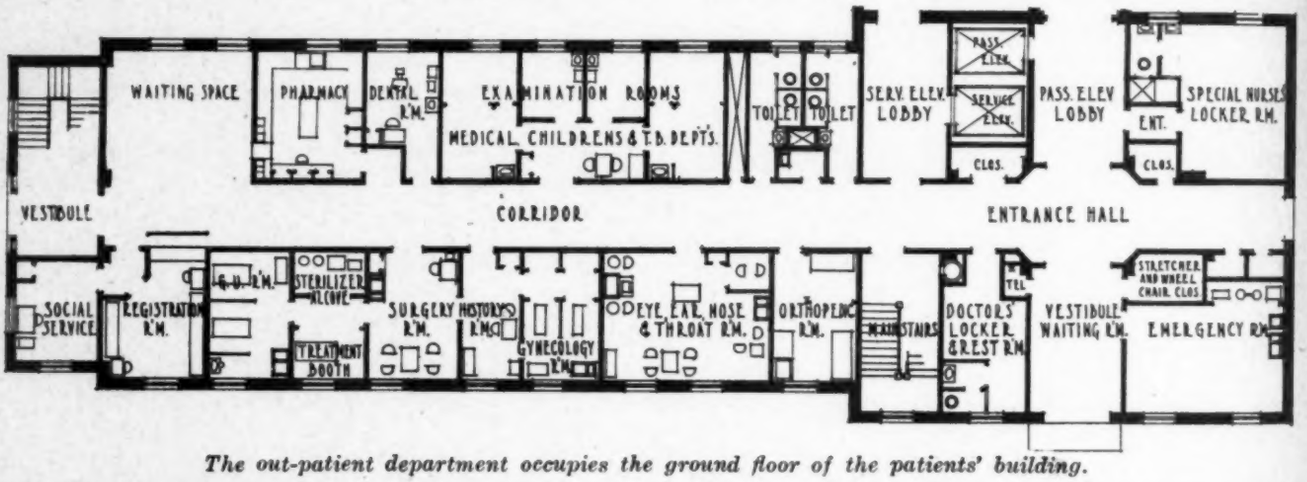
The building is served by an elevator of the dual control type, which can be brought to any floor automatically by pressing the car button at each floor.

The plumbing throughout this floor, planned with the idea of convenience and sanitation, consists of the latest modern devices especially planned for hospital work. The bowls, basins, lavatories and closets are of vitrified china and the valves, faucets and piping are of brass, nickel-plated and highly polished. The scrub-up sinks are equipped with knee action modulating valves, thus enabling doctors and nurses to prepare for operations without the necessity of touching anything with their hands.

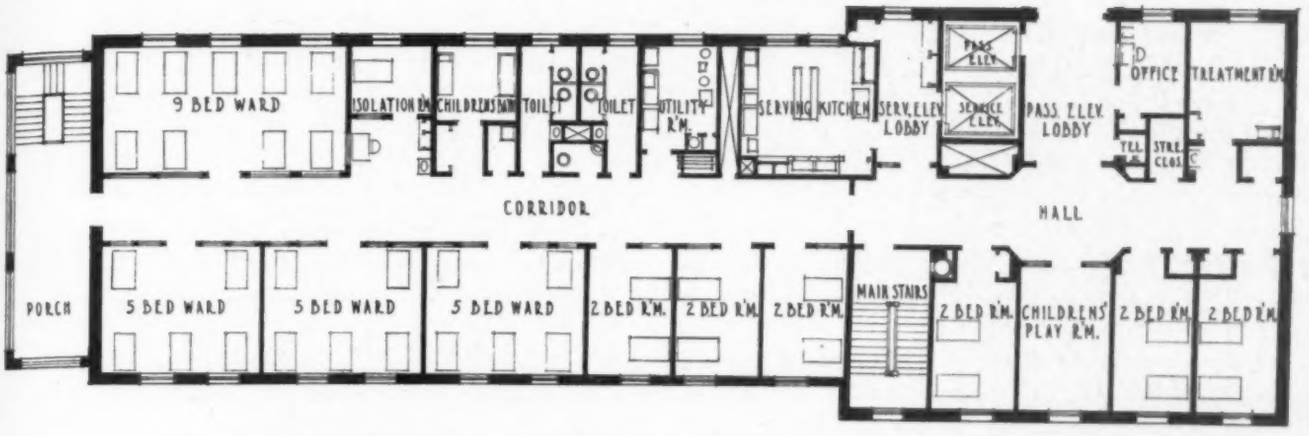
Adaptability for service is the keynote in the planning and construction of the whole building. There is no lost space and no extravagance of furnishings.

The new patients' building, work on which was started in August, 1927, will be a six-story fireproof building of brick, steel and concrete. The structure will harmonize with the other buildings of the hospital group and will increase the hospital bed capacity to nearly four hundred. It will provide for 133 patients distributed as follows: first floor, thirty-four beds; second floor, thirty-six beds; third and fourth floors, twenty beds each; fifth floor, twenty-one beds and twenty bassinets.

The ground floor is given over to the out-patient department. The ambulance entrance will be on the Seventeenth Street side of this floor, in what will be the central section of the building. To the right of the ambulance entrance will be the emergency room where all accident cases will be received and given a preliminary examination and treatment before being assigned to the various wards or private rooms. The dispensary entrance is at the rear end of the building and leads into a large waiting room. Opposite the waiting room is a registration office where the out-patients will be registered and classified for



The out-patient department occupies the ground floor of the patients' building.



The second floor of the patients' building, when completed, will be the children's floor.

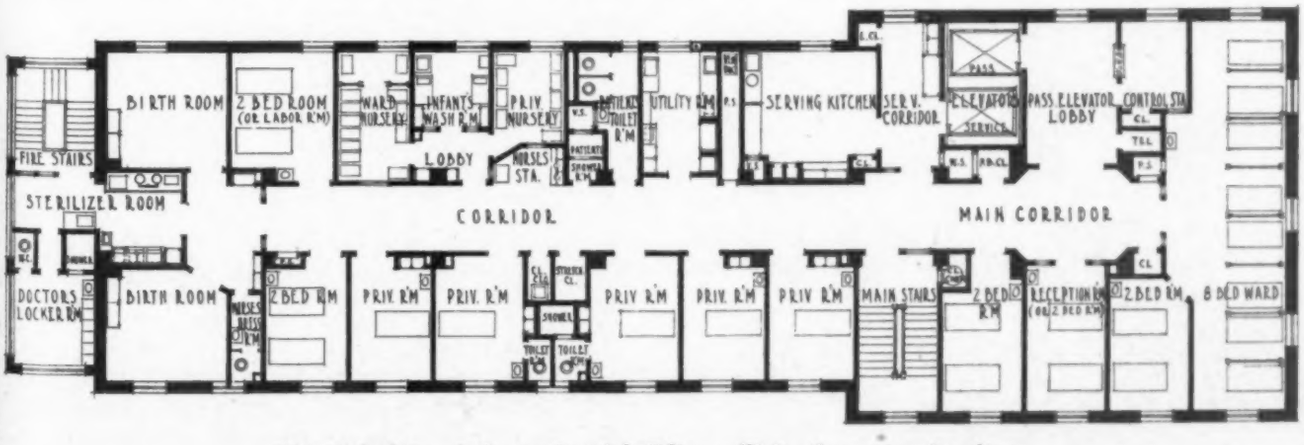
the various dispensary clinics. The registration office will be in charge of the hospital social service department. Adjoining the waiting room will be a modern up-to-date pharmacy where all prescriptions, both for the hospital and the out-patient department, will be filled.

The medical, surgical, chest, cardiac, genito-urinary, eye, ear, nose and throat and baby clinics are all housed in separate rooms, adequately equipped for their particular needs. The ground floor will also contain a nurses' locker room, sterilizing rooms, out-patients' toilet rooms, a doctors' locker room and a utility room in which will be housed the pumps and water softeners and hot water generators necessary to supply the building.

The first floor will be the men's surgical floor. The floor will have four four-bed wards and seven two-bed wards. Each ward will be provided with a lavatory with hot and cold water. The nurses' station will be in the center of the floor to the right of the central corridor and will be equipped with a nurses' call system. This floor will also have a utility room equipped with water, instrument, utensil and bedpan sterilizers. A particularly commendable feature of the layout of this floor and the other patients' floors is the location of the serving kitchen, which is completely isolated from the patients' section by a separate corridor leading off the main corridor. Food is brought to the serving kitchen by a service elevator that opens into the service corridor leading directly into the kitchen. This feature eliminates all noises and food odors, and adds materially to the comfort of the patient. Treatment rooms, a nurses' office and toilet facilities for nurses and patients are also found on this floor.

The second floor will be the children's floor and will accommodate thirty-six patients. The largest ward will be for nine patients. There will be three five-bed wards and six two-bed wards. The creating of small wards will enable better segregation of cases and better medical and surgical supervision. The upper portion of the corridor partitions of the ward will be in glass, which will enable the nurses to have full view of all patients at all times.

The third and fourth floors will be for private and semiprivate rooms. There will be two rooms with bath and toilet, and two rooms with toilet and lavatory on each floor. Each private room will have a built-in wardrobe and a hospital service cabinet, as well as running hot and cold water. The semiprivate rooms are large and commodious and will be equipped for two patients.



The fifth floor of the patients' building will be the maternity floor.

A special feature of the private floors will be the extensive wiring system which will provide outlet for cardiographs, x-ray, and diathermic treatments. Patients' bath, men's and women's toilet, special nurses' rest rooms, serving kitchens, a utility room, a nurses' station, a telephone booth, and linen closets are the other features of the private room floors.

The fifth floor will be the maternity floor. Two birth rooms will occupy the north end of this floor and between them will be the sterilizing room and the doctors' preparation room. A labor room adjoins the birth room on the east side of the building. This group of rooms is partitioned off from the remainder of the floor. Here as in the private room floors there are rooms with bath and toilet and less expensive private rooms. There are also three semiprivate rooms of two beds each and an eight-bed ward in the south end of the floor.

The nurseries are partitioned off from the rest of the floor with double glass walls, enabling the nurses and visitors to see each bassinet and yet ensuring quiet for the newborn babies. A special wash room equipped with infant baths and dressing tables is provided for the nursery. Patients' bath and toilet rooms, a nurses' station, a utility room and a serving kitchen are also provided on this floor.

The building will be served by two elevators of the dual control type; one opening into the main corridor will be used for the carrying of patients and visitors, while the other opening into the service corridor will be used for the general hospital service.

When it was decided to vacate a certain portion of the west wing to make a place for the new six-story patients' building, it was found necessary to provide new quarters for the children who had been housed in the second floor of the west wing. No place seemed so well adapted for a children's ward as the north roof of the east wing, which was being used as a roof garden. Plans for the enclosure of the roof were drawn by the architects. Sixty days after the contract had been let the children were moved into the new quarters and now occupy the finest ward in the hospital buildings.

This ward, 37 feet wide by 75 feet long, is open on three sides. Large metal sashes, 5 feet high and 13 feet long, extend clear around the room on the three exposed sides, admitting an abundance of fresh air and sunshine. At both sides of the entrance to the ward are private rooms that are used for very sick children and for isolation purposes. The ward has bed and crib capacity for forty-three patients without overcrowding.

How the Industrial Clinic Functions

In a recent article in *Hospital Social Service*, Dr. Frank G. Pedley describes as follows the work being done by the industrial clinics that have been established in various hospitals throughout the country:

There can be little question that the average man's health is profoundly influenced by the occupation that he follows and, to a certain extent, the duration of his life is determined when he selects his life work.

Economic status, nationality and the like, probably account for some of the years, but the fact remains that the industrial worker has a higher death rate than the nonindustrial worker, and this presents an important problem in preventive medicine.

As a step towards the study of the factors that influence the health of industrial workers, industrial clinics have been established in several hospitals in the country. One of these clinics is the industrial department of the Vanderbilt Clinic in New York City. The industrial department is operated jointly by the department of medicine and the institute of public health of the College of Physicians and Surgeons. It was established in November, 1925, and has been operated continuously since then.

Each patient admitted to the Vanderbilt Clinic is interviewed by a worker at the admitting desk and if his condition can be attributed in any way to his work, he is sent to the industrial department for study. In addition to this the workers in certain occupations that are known to be hazardous are sent to the industrial department, whether their symptoms seem referable to their occupations or not. If the occupation of the patient does appear to be responsible for some of his symptoms he is held in the industrial department for thorough study.

Since occupations are now so various and specialized it is difficult for a physician to be cognizant of all conditions of work, and when a patient presents himself for treatment suffering from obscure symptoms that may be caused by his occupation it is the practice to visit his place of employment and make an investigation of the conditions of work.

The records of the industrial department of the Vanderbilt Clinic are not sufficient as yet to justify any particular statements. At the Massachusetts General Hospital, Boston, where an industrial clinic has been in operation for a number of years, it has been found that 6 per cent of all people applying to the hospital for treatment are affected in some way by their occupation. It has been found that nearly 20 per cent of painters admitted to the out-patient department are suffering from lead poisoning.

What Results Show

From the results so far obtained at industrial clinics it is evident that an important element in the field of diagnosis and treatment is being disregarded in most hospitals and dispensaries. For the observation of social and economic status, social departments have been established. Now industrial clinics are being organized to study the industrial environment.

The industrial clinic of the Massachusetts General Hospital is one of the pioneers. The industrial department of the Vanderbilt Clinic is of recent date. In California an industrial clinic is being organized by the Stanford Medical School, San Francisco, and in Montreal an industrial clinic at the general hospital in connection with McGill University was started in the fall of last year.

STUDIES ON HOSPITAL PROCEDURES

Some Basic Principles in Social Service*

A PHYSICIAN recently questioned a hospital social worker: "Why is it that you social workers still persist in writing articles of propaganda? Why can't you realize that hospital social work has come to stay and that everyone knows it? When you write, tell us about your experience without self-consciousness just as the doctors do. Don't mix your presentation of facts of experience with justification for existence."

Most of us would be glad to accept this friendly rebuke and proceed, but we hear on good authority that there are still hospital superintendents who have not accepted the principle recognized by the secretary of the American Hospital Association as far back as 1918,[1] that every modern hospital should have social service and provide for it in the budget.

The purpose of these articles, then, is to put a few questions to such skeptics, and also to commit ourselves on some standards of organization, personnel and procedure that have been wrought out of experience and are therefore worthy of consideration. If we can create some discussion of such unsettled questions as exist we could then proceed to the more interesting mutual problems that are still ahead of us.

Whiting Williams once said of the industrial workers of this country, that they lived their way into their thinking instead of thinking their way into their living. To some extent this is true of the earlier hospital social workers, who started on the great adventure of finding the place of social service in an already complicated organization that was self-conscious in its sense of adequacy.

The hospital social workers had a clear focus on the patient and his problems. They saw the father of a family discharged from the hospital "well," according to the discharge note, but unfit to return to responsibilities. They saw the Italian mother mystified as she left the clinic with neatly printed instructions about milk modification; the young pregnant girl staggered by the diagnosis, which was all the clinic had given her. Such human problems filled the thoughts of the social workers, but clear thoughts on organization or functional relationships within or without the hospital had not yet formulated in their minds. Twenty years have served to clarify many principles on which organization and policies rest; principles that have been imbedded in the evolving experience of social service that has kept close to the personal problems of the patients.

Let us see what those principles are, for unless they are sound, our development may be unstable.

First, we recognize a social component in medicine. In the happiest and most satisfying relation of doctor and patient, this is recognized by both in simpler terms of friendliness, understanding, freedom for discussion of all that is involved in the upsetting experience of sickness and its attendant worries.

Hospitalization adds a still more upsetting complication by removing the patient from his home and familiar surroundings into a hospital bed—a familiar procedure to us but a strange and unwelcome experience to most patients, since it is not a normal first reaction of man, woman or child, to welcome readily care by strangers rather than familiar surroundings, never so dear as when we are ill.

Caring for the Patient

Successful medical practice necessitates recognition of these facts. Dr. Francis W. Peabody, Boston, in his beautiful address to the Harvard medical students said: "The good physician knows his patients through and through, and his knowledge is bought dearly. Time, sympathy and understanding must be lavishly dispensed, but the reward is to be found in that personal bond which forms the greatest satisfaction of the practice of medicine. One of the essential qualities of the clinician is interest in humanity, for the secret of the care of the patient is in caring for the patient."[2]

Now the doctor on the staff of one large modern hospital may have exquisite "sympathy" for his patient, and "understanding" so far as he has opportunity to get the basis for understanding. Of "time" for individual attention beyond physical examination and advice, he has the minimum. Many doctors and hospital administrators have, of course, recognized this. It was because they cared for the patient and saw that the situation

*A study prepared for THE MODERN HOSPITAL by Ida M. Cannon, chief, social service department, Massachusetts General Hospital, Boston, and Lena R. Waters, director, social service department, University of Pennsylvania Hospital, Philadelphia.

1. Social Service and Hospital Efficiency, A. R. Warner. Proceedings of A. H. A., 1918.

2. The Care of the Patient, Francis W. Peabody, M.D., Jour. Am. Med. Asso., March 19, 1927, Vol. 88.

in which they found themselves meant a sacrifice of many of the essentials of successful medical practice, that they welcomed the introduction into the hospital staff of one whose skill could be applied to discovering and helping the patient in personal problems arising out of or exaggerated by his sickness.

If every patient in our hospitals had the advantages and blessings of this personal relationship with his physician throughout his illness, a social service department might not be necessary unless perchance the solicitous physician might wish consultation as to possible resources for carrying out his carefully thought-out plan for the patient after he left the hospital, or might want help in relieving a distressing situation at home which was preying on the patient's mind.

These are days of facing facts. Our hospitals today present no such ideal relationship of doctor and patient. The hospital social worker who would help to correct this situation must steer the course between, on the one hand, securing for the patient what he needs in personal extra-medical service and, on the other, leaving with the physician the responsibility of thinking and planning, if not doing, for the patient in an inclusive way. Some of us recognize that there is danger here that we, in our zeal to serve the patients, may take over services that ought to rest with the physician, administrators or nurses, and that they may be only too ready to leave to us. We maintain that it would be an unfortunate state of affairs if the whole social interest and responsibility for the patient rested with the social service department.

Hospital Interrelations

The rapidly changing modern hospital is not unlike the active child who will not stay still long enough to have his picture taken. But there are tendencies that we can recognize and these are dominantly social. But no matter how the hospital expresses itself in community interest or in education or research, the central purpose—the very core of the institution—is the relationship of doctor and patient. These two factors are the *sine qua non* of the hospital. It is to supplement, reinforce and safeguard this relationship that nursing, social service and all the extra-medical services are established. None of these exists for its own sake.

The trustees when establishing a hospital take upon themselves the final responsibility for the care of the patients admitted to the hospital. They delegate part of their responsibility to the administrator. The responsibility for medical treatment and care of patients they delegate to the appointed medical staff. The social worker, appointed also by authority of the trustees, has a dual relationship. She has responsibility to the administrator, who represents the trustees, in carrying out the hospital policies and purposes, and also to the physician in safeguarding his relationship to the patient, by making it possible for the doctor to see the whole picture of the man he is treating and making the way clear for the patient to carry his responsibility in the treatment plan.

Before discussing organization of a social service department, it is essential that we should clearly understand what it is that social work has to offer to organized medicine in our modern hospitals. If we can agree that it is needed and where its closest relationships should be, it will not be difficult to discuss intelligently the question of the organization of such a department within the hospital.

Social Service Not a New Function

Is social service a new function or an old one revived and reinterpreted? We maintain that it is both. Altruistic motives have, of course, always promoted the establishment of hospitals, and we find in the history of hospitals throughout the centuries, definite evidence of extra-medical services to those who were under their care. Hospitals were often the refuge for the poor, shelter for the homeless and the pilgrim, haven for the foundlings and the aged. Even workshops and employment bureaus were sometimes associated with them. Of a thirteenth century Mohammedan hospital in Cairo, we read that "discharged patients were given a gold piece, that they need not return at once to work."[1] The hospitalers, organized in association with the crusaders, performed many and varied services that suggest social service, in distribution of material aid, the care of foundlings, military protection to convalescents during their journey homeward across Europe. Our colleagues, the almoners of the English hospitals of today, are succesors of the dispensers of alms to poor discharged patients of earlier centuries.

There is much interesting evidence of the conviction of a social responsibility for patients in these earlier hospitals that we cannot enumerate here. But it is well for us to realize that our roots are imbedded in the social conscience of an earlier day, out of which our modern hospitals and other institutions and agencies for social welfare have evolved.

More recent history would show us that our hospitals, under the impetus of medical science,

1. History of Nursing. Nutting and Dock, Vol. 1.

became increasingly absorbed in their internal affairs; more self-centered and less mindful of their social relationships. During this period the hospital has been the most important factor in developing the professions of medicine and nursing. Meantime social conditions under which people lived and worked and played in our growing cities, called for the attention of the social student and we find social service in many forms developed to deal with conditions that encouraged unwholesome community life, and to help those who were overwhelmed by them.

It was not a matter of chance that hospital social service was first established in the largest hospitals and dispensaries, where poor patients in large numbers were cared for. Social students such as Charles Booth in London and Amos Warner in this country had given plenty of evidence of the interplay of adverse social conditions and sickness. Medicine in its attack on disease has always been first concerned with disease in its grossest pathology. So, in social work, the direst poverty and distress, the most hopeless situations formed the classical picture on which charitable effort was first focussed. That the hospital, coincident with its sick population, had assembled all sorts of human problems—chronic disease, dependent old age, illegitimacy, homelessness, unemployment, parental neglect, broken homes—has long been recognized in theory and fact. But it was not enough to recognize the facts. It was important to do something about these problems when it was convincingly shown that they profoundly modified and jeopardized medical treatment. It was those who knew and understood what had been happening in the field of applied sociology who saw the application of social case work to the hospital problems. Case work method was familiar to medical men. They realized that it was not enough to see and feel for the patient in his personal difficulties. It was important to know as accurately as possible those factors in the patient's life that were affected by the medical situation and treatment.

Developing the Individual

One of our greatest leaders in social case work, Porter Lee, says the objective of such work is "to develop within the individual his fullest capacity for self-maintenance and at the same time to assist him in establishing for himself an environment which will be as favorable as may be to his powers and limitations. Failure in self-maintenance presents itself in many forms. One may be unequal to the task of earning a living, one may be unequal to his responsibilities as a parent, student, employer, employee or teacher. One may be incapacitated through sickness, helpless through lack of adult supervision, unable to withstand temptation, injuriously affected by the ordinary experiences of life. . . . .

"These are not new problems in the history of mankind. They were not discovered by social case work. They have been through centuries the concern of the charitable and the benevolent, of the clergy and the medical profession. The contribution of social case work has been a contribution to a more profound understanding of their origin and implications, to the development of more far-reaching methods of studying and dealing with them, and to a better correlation of the human services of all kinds that are helpful to an individual who is struggling with them. Social case work, in other words, has become both a well established form of expert service to human beings who have failed in the task of self-maintenance, and an important ally of other services, such as medicine, education and the administration of justice, which also deal with these human difficulties from different points of view." [1]

A Transitional Phase

We have been passing through, we are, perhaps, just emerging from, a period in which medical practice has been in the grip of science. It has forced a rapid increase in institutional care of the sick, has emphasized technique of examination and treatment procedure that has absorbed hospital physicians and, alas, has diverted many hospital nurses from the practice and perfection of the art of nursing. Leaders in medicine, nursing, hospital administration and hospital social service recognize the fact that all is not well and are trying to adjust their various services to this changed situation.

What medical social workers and doctors and hospital administrators and nurses, who understand one another, are trying to do, is to secure a unity of consideration of the patient—the whole man—while he is in the hospital and when he leaves, still not wholly restored to health. They aim to study and treat in intelligent cooperation the diseased body and the troubled mind and spirit. They know that it is not merely humanitarian. It is good practice of the science and art of medicine.

Modern medical science has brought us not only a more skillful and accurate technique for pathological study. It has brought the revelation that in many diseases operative procedure and drugs are secondary to freedom for Nature's method of restoration to health.

1. Vocational Aspects of Medical Social Work. Introduction by Porter R. Lee. Published by American Association of Social Workers, 1927.

Editorials

Coordination of Community Hospitals

A CENTURY and a half ago a distinguished American remarked, in substance, that unless the colonists all hung together they would be most likely to hang separately. In that instance the wisdom of a policy of unification of purpose and effort was proved by later events.

Every community, whether it be a city of many thousands of souls or a town whose dwellers may be counted by the hundreds, should examine its health program to learn whether a plan of unification or diversification is being practiced in preventing and relieving sickness.

Hospitals, it is feared, exist too much unto themselves. A certain attitude of self-satisfaction, a tendency to introspection, an obliviousness to the existence of the community's health problems as a whole, sometimes creep unawares into the individual hospital's effort and organization. A centralized steering agency or welfare committee, with a local secretary who has organizing ability and who has the confidence of the directors of the several hospitals of a community, has been often urged. Indeed in not a few instances this plan has functioned for longer or shorter periods, only to be abandoned as impracticable, too difficult or too expensive. Jealousies, misunderstandings and a lack of preventive medicine vision, are but a few of the defects that have prevented a well deserved success for this sound attempt at coordination of hospital effort. To know of a unit health need, and to be aware of the exact location and cost of a suitable hospital bed to meet it, is surely information that has great possibilities for good to the sick man or woman.

Trustees of the hospitals of a town or city have in their hands the solution of many of the community's health problems. Who has ever heard of a local association of hospital trustees that meets regularly to discuss problems of common interest, and to consider every phase of the question of how their several institutions can best serve the whole community? One may expect the answer from those of pessimistic vein, that board members are busy business men and cannot therefore so deeply concern themselves with such matters. Nevertheless such meetings would certainly prevent duplication of effort.

Is it too Utopian to expect that some day, some how, specialized and expensive equipment and service may be saved one hospital because adequate preparation for such work has been made by another? Could not the second institution stress another community medical service because it has been spared the necessity of duplicating an effort adequate to the local need?

THE MODERN HOSPITAL is no doubt looking far into the future in hinting at the possibility of such a coordination of hospital service and endeavor. It is not unaware that hospitals are perhaps rightfully jealous of their autonomy, their traditions and their independence of action. But each dollar should buy a full measure of restored or preserved community health, and in the last analysis the principle of the greatest good to the greatest number at the least cost must prevail.

Convalescence or Chronicity

THE demand of this day and age is speed and then more speed—speed in industrial production, in amassing wealth. Even the hospital field has not remained untouched by this urge to hurry.

Acute hospitals shun patients with chronic or even subacute illnesses, because their bed turnover is lessened by such admissions. It has come to be something to be mentioned with a modicum of apology, that the average stay of the hospital patient is over a fortnight. Even a two-weeks' stay, to some administrators, needs explanation. Indeed, the average intrahospital period has been gradually shortened, until the beds of not a few institutions each serve three or even three and one-half patients a month. Quantitatively, this is a laudable record, and possibly in most instances there is no lack of quality—of adequacy of service to such patients.

But it should not be forgotten that convalescence is a critical period in the life of the sick man or woman. It is then that disarranged and disturbed bodily cells are becoming again adjusted to withstand the buffetings of everyday life. The delicate processes of functional rehabilitation require weeks for adjustment, as a result of the shock—the catastrophic turnover, that accompanies a major operation.

To discharge a patient too soon after a serious illness has subsided or has been remedied by surgical interference, is to court that distressing sequel of convalescence—chronicity. Nor need there be any definite tissue disease remaining to render the patient unfit for work or pleasure. Functional nervous disease is just as real, just as disabling to the patient, as was the hernia inconvenient, or the acute appendix painful. The incision of tissues, the handling of viscera, the fear

of the patient or even the mere administration of an anesthetic, are factors that are capable of producing functional disarrangement, the adjustment of which is one of the processes taking place during convalescence.

Let the hospital be certain that in doing a great good it is not at the same time favoring a future preventable harm. To make haste slowly is a good rule to apply to the period of convalescence. If by adding five days to the average patient stay, convalescence would be made sure and chronicity less likely, it would be time and money well spent.

Has Hospital Social Service Justified Itself?

IN ANOTHER department in this issue appears a thought-provoking article on hospital social service, by Ida M. Cannon and Lena R. Waters. This is the first of two sketches that deal with the origin, organization, function and cost of hospital social service.

That all hospital executives are not convinced that this department has medically and economically justified itself, is undoubted. It is said that in only about five hundred hospitals in this country and Canada are there well organized social service departments. And in not a few instances the medical activity of these groups is subordinated to the task of financial investigation of the patient's ability to meet his hospital expenses.

Why is the mention of social service so often accompanied by a shrug of the executive shoulder? Does this attitude bespeak hopelessness or mere indifference? If social service is necessary to the speedy and permanent return of the sick man to usefulness, are hospitals not equipped with such a department performing their full duty to the public?

THE MODERN HOSPITAL believes that some of the vexing questions relative to certain aspects of social hospital medicine will be answered in these articles.

Hospital Publicity

THE prime requisite in the preparation of hospital publicity is to have something to say and to say it with the minimum number of words and the maximum effect. To secure the latter, short paragraphs of short sentences of short words are best, but in doing this the style should not be jerky. Really effective literature plays a tune and pleases the ear; better still, it scans; when read aloud, it sounds well. Words that are to be accented should open or close the sentence; to place a major idea in the middle of an involved sentence is to bury it where its effect will be lost.

When an article is to be written, the constituent data should be selected with care, boiled down, skimmed of all froth and strained to remove all extraneous detritus. Then it should be arranged so as to catch the eye, to hold attention, to carry conviction and excite action. The point of the article should be in the first seven lines. It must be human and hence imagery must be used to sugar-coat the facts. Slang, vulgarity, quotations, foreign phrases, technical words and "talking down" to the prospective audience should be avoided. Use simple, easily understood words. Omit bromides, sentimentalities and hints. Humor should be injected with great discretion. Whenever possible, use good illustrations and graphs, but be sure that they are easily understood and convey the exact message.

After the material has been beaten into shape, put it away for a week and then go over it again. Remove trite phrases, increase clarity, iron out the style, cut out all unnecessary matter and inject the "wallop." Be sure that the style is simple and easily understood, but do not pattern it after the bedtime story. Make it snappy but do not sacrifice dignity in so doing. Make it convincing but do not mentally "strong-arm" the reader; avoid the perpendicular pronoun and the verbs, "must" and "should"; for conviction, depend upon statements of cause and effect. When the story is told, stop.

A Contemptible Practice

UNIVERSAL respect is paid to the learned and ethical practitioner at law, and rightfully so. His profession, if practiced on a high moral level, may be the means of ensuring that justice be done to all; that the weak do not suffer through oppression of the powerful; that the trickster be brought to his just deserts.

But there is no individual more deserving of our contempt than the lawyer who lives by inciting others to take legal action when he knows no case exists or when he profits by the extortion of an unjust retaining fee.

The "ambulance chaser" is a stench in the nostrils of all decent barristers. It is he who, either personally or by agent, appears as if by magic almost before the injured patient has been placed upon the examining table in the accident ward. His runner, while apparently possessing the face of a true friend, has in reality the body of a wolf covered with sheep's clothing. If permitted, he delivers a touching oration on the in-

justice done to the poor by great traction corporations or on the carelessness of motorists generally. The card of his corrupt employer now appears.

It is the hospital's duty to protect its patients against these shysters. Moreover, if a suit for damages is begun by a patient who has suffered an accident, and a verdict is secured, the lawyer always gets his fee, the patient gets what is left and the hospital's bill remains unpaid.

Even ambulance drivers, receiving ward orderlies, and, rarely, impecunious young interns have been approached and even corrupted by this despicable breed.

Hospitals may eject the "ambulance chaser" when he is recognized; law associations may outlaw such unethical practitioners, but even then they will too generally carry on their nefarious work.

The refusal by the administrator of permission to interview accident cases, when the request comes from those of questionable antecedents and the prevention or the supervision of the signing of legal papers by such patients, will curb this practice in a measure.

"Chase the ambulance chaser" is a good slogan for all hospitals to adopt.

Talking It Over

MARCH, the month of war, income taxes, St. Patrick's Day, presidential inaugurations, roaring in lion-like, and lamb-like bleating out, is here again. In the South the janitor is letting the fires die; in the North he still stokes furiously. Colds are yet prevalent, but as the days lengthen and the temperature waxes, they and many other communicable morbidities wane. Scientists are telling of the relationship between sun spots and disease—an interesting epidemiological study demonstrating how close the ancients came to a great truth yet missed it wholly—a complicated and interesting problem in ecology, which seems to be reaching a partial unraveling at least.

* * *

A LOT of people take autogenous credit that they do not sin. Smug negative virtue sometimes does more harm than so-called badness. What the world is looking for is positive goodness that translates itself into deeds of real worth. You can't encloister your soul from the sunlight of human experience and expect it to grow.

* * *

FRANCE excels in many things but there is one at which she is unapproachable—the celebration of anniversaries. Never does she neglect the centenaries of her departed great—artists, scientists, orators, statesmen, educators and poets—and in so doing she demonstrates the fecundity of her civilization. Recently she celebrated the tercentenary of the birth of Bessuet, her greatest funeral orator. In his time no notable could be buried without his services, and he presided at the obsequies of cardinals, kings, queens, princes, warriors and statesmen. Bertholet, the great chemist, also came in for posthumous honors, as did Laennec, the great physician. A worthy and practical means of subliming and perpetuating patriotism.

* * *

WHO was Villemin whose centenary was enthusiastically celebrated in Paris from the 15th to the 18th of October last? What did he do to merit the intense interest of the president of the republic, the minister of war, the Academy of Medicine, the Sorbonne and the entire medico-social world of France? Why should he be haled as one of the great benefactors? He it was who continued and expanded the epoch-making work of Laennec, the discoverer of the stethoscope, and was the precursor of Koch, who laid the foundations of experimental research, and, in 1865, seventeen years before Koch, demonstrated the virulence, unity, specificity and contagiousness of tuberculosis, thus placing in the hands of man, his first weapon against that great social scourge.

* * *

THE United States Supreme Court has defined good will as "the desire of the satisfied customer to return to the place where he has received good treatment." If every copy book and every classroom displayed this dictum, there would be fewer failures in life.

* * *

ELEVEN years ago, a silk-hatted college professor with glasses bestriding nose, rode to the Capitol and read a short speech; all the whistles in Washington blew; the so-called Great War had been entered. Not that any war was ever great or decided anything except that there was to be an open season for human beings and that an enormous amount of effort and property should be expended on the most profitless, blundering, stupid method devised by man for the settling of differences. The thin lacquer of civilization cracked and peeled, showing the savage beneath; a pandemia of hatred prevailed; ingenious new atrocities in human slaughter were created; the progress of posterity was endangered by the handicap of debt. This generation has had its fill of war; the next, not less stupidly, will probably prate of "the field of honor" and "the cause of glory."

* * *

IN 1895, the diphtheria death rate in New York City was 120 per 100,000 of population; in 1926, it was 8 per 100,000. Stock in the Charon Ferry Company is falling rapidly.

* * *

IF YOUR baby is six months old, the auguries indicate that the time has come to have your doctor protect it against diphtheria by toxin-antitoxin. Sound the toxin and the antitoxin.

* * *

WHO was Vesalius? Fallopius? Herophilus? Vidius? Eustachius Answer these questions and include them in the anatomy course for nurses and you will greatly interest the student and give her mental pegs on which to hang living facts which otherwise would be dry and dead. Tell them why the duodenum is so named and by whom; give them the thrilling stories of Laennec, Beorhaave, Pasteur, Lister and Florence Nightingale, and you will stimulate their imaginations and give them a background from which to build in the foreground of modern knowledge.

The Modern Hospital Reading Course: Lesson XIV

How the Hospital's Housekeeping Department Should Function

By EDGAR C. HAYHOW, B.C.S.
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THE history of the development of institutional housekeeping would be an interesting study for the hospital administrator. It has no doubt evolved from the routine of simple household management, and, following the nineteenth century era of development of the sciences and of the evolution of machines, it has become recognized as a definite and specialized job.

Housekeepers Must Be Trained

The necessity for trained supervision has been realized. At the present time many colleges offer courses in household economy, domestic science and institutional household management for training women in the practical, as well as the theoretical side of household administration. The value of these courses is indisputable, but even more important are a thorough groundwork in practical problems, practical experience and a personality that can not only meet the various outside and departmental relationships, but can successfully cope with the psychological problems presented by the housekeeping employees. The average mentality among persons obtainable for the menial work of the department is probably lower than in any other hospital division. This fact becomes doubly evident in times of prosperity, with the resultant labor shortage.

If it were possible to set up a skeleton organization or outline a standard of academic training for household duties that would be applicable to every type of institution, the task of housekeeping would, no doubt, prove more simple. But experience shows each job to be unique, at least in certain particulars. A set of standards for the housekeeping department must, therefore, avoid details if it is to be universally applicable.

The large hospital, the small one, the municipal plant, the private sanatorium, the urban, the suburban, the rural, the antiquated, and the modern hospital all offer distinct problems. In the preparation of this article, about a dozen institutions were studied. Conditions failed to coincide in any two of them. The following list of functions was frequently found, however, attached to the housekeeping department:

Supervision of general household cleaning throughout the entire physical plant, including the wards, the private rooms, the halls, lobbies, offices, the quarters of administration, staff and personnel.

General supervision of the laundries and linen rooms.

Transportation of soiled and clean linen throughout the institution.

Requisitioning and distribution of the necessary household cleaning supplies.

Cleaning of porches, sidewalks and entries.

Care of furniture and requisitioning of furniture repairs.

Requisitioning of linen and supervision of sewing and mending.

Distribution of ice and removal of institutional refuse.

Maintenance of various inventories of supplies, and preparation of reports of performance.

Employment of the personnel and the proper allocation of routine duties to carry on the necessary work.

Periodic reports to the superintendent covering the work of the department.

The Housekeeper's Duties

In all the institutions studied, the housekeeper was responsible for the physical cleanliness of the institution and for the supervision of maids, porters and cleaners. In many cases her duties included the supervision of the laundry and general linen rooms and the distribution of soiled and clean linen. The larger hospitals separated the cleaning of the nurses' home from the main institution, the housekeeper of the nurses' home coming under the control of the directress of nurses. An efficient scheme for a large organization provided a housekeeper with three assistants —one general assistant, an assistant in charge of the laundry and one in charge of linen collection, distribution and repair. Most large institutions provided a foreman in charge of the porters and a foreman in charge of laundry. Small hospitals provided one housekeeper in full charge of cleanliness, laundry and linen.

In order to establish a standard method of performance, special attention is drawn to the need of developing careful working schedules and job analyses, and to the importance of hourly and daily supervision. As a guide in carrying out these recommendations, the reader is referred to Chapman's "Hospital Organization and Operation,"[1] where various departmental organization charts are shown. If possible, a detailed housekeeping service manual should be compiled; otherwise, typewritten directions will serve this purpose.

The following is a part of a working schedule for the plant of a 150-bed institution. The department is supervised by a head housekeeper. Two assistant housekeepers are employed, one in charge of chambermaids, porters, floor polisher, window cleaners and housemaids, and the other as matron in charge of linen storage and distribution, sorters and seamstresses. (The laundry is supervised through a laundry foreman).

Daily Routine of Department

The assistant housekeepers report employees' time to the housekeeper each morning for the day previous, checking the time book accordingly. The housekeeper plans the day's routine; if short of help, she arranges the schedule for work that is absolutely essential, such as linen and ice distribution, garbage collection and office and reception room care. This necessitates overlapping of duties and combination of efforts. This must be done with care so as to operate the department without any evidence of lack of service or general inefficiency. The housekeeper arranges for the filling of vacant jobs. This is usually done through employment agencies, newspapers or applications on file. References must be looked up in each instance.

A thorough inspection of the entire institution is made at 7:00, 9:00 and 11:00 a. m., also at 1:00 and 4:00 p. m. The first round is made by the assistant housekeepers. A careful notation is made of general cleanliness, need for repairs, and efficiency of employees on the various stations. Daily linen requisitions are inspected and if necessary, altered. Altering of requisitions from units not a part of the housekeeping department is discussed with appropriate department heads. In hospitals using an "exchange system" this is not necessary.

Stated hours are planned for distribution of soap, soap powder and other departmental supplies, and these processes are arranged so that all errands can be accomplished with as little waste of time and steps as possible.

Maids are responsible for the proper cleaning and care of personnel quarters, lavatories, private rooms and wards, as assigned.

Porters care for certain "stations" or portions of building, as assigned. Each job should be numbered and a job analysis prepared for it. Porters' duties usually include general cleanliness of walls, floors, furniture, and in some hospitals, of windows; also, assistance with all work requiring heavy lifting or rearrangement of beds, furniture and equipment. The duties of garbage men, ice men and soiled linen porters are self-explanatory. Schedules should be prepared for collection and distribution.

Three methods of window cleaning are practiced: (1) an outside contract provides periodical cleaning of all windows; (2) one or more window cleaners are employed by the institution and rotate under direction of the housekeeper; (3) the cleaning of windows is part of the duty of the porter assigned to that section. If the hospital staff cleans windows, thought must be given to proper belts and straps for employees' protection.

The question often arises as to the advisability of maintaining a separate housekeeper under the nursing department. The practice in the majority of small and medium-sized institutions is to have complete housekeeping supervision under one person. Ordinarily, for them, dual housekeeping control is not desirable. The housekeeper of the nurses' home in large institutions can readily be, and usually is, under the directress of nurses.

Making Requisitions

Requisitions for supplies are made out by the housekeeper or her assistant, in accordance with current needs. These are signed by the housekeeper and sent to the administrative office for approval. In a similar manner, requisitions are originated for needed repairs or alterations. Some hospitals use a "Patient's Discharge Slip," notifying the housekeeper of the discharge of patients and the necessity of cleaning the room and washing the walls. Since hospital rooms are generally in demand, this work must be done as quickly as possible.

Mechanical household devices are finding more and more use in hospitals. Vacuum cleaners, floor polishers and cleaners, electric sewing machines save labor and expense and usually give efficient results. A definite training is necessary for the handling of certain mechanical appliances, and in such a case it is best to assign the machine to one person, train the person and arrange a schedule throughout the institution. This is especially true of floor machines, where experience in handling brings better results.

It is important that carefully worked out clean-

ing formulas and cleaning methods be established. The mere combination of soap and water may give a white surface—so white that not a sign of the original paint may be left. It should not be expected that every porter and maid is trained in the art of cleaning. Close supervision and instruction in the methods of cleaning and the proportions of materials used must be given. The details of approved cleaning formulae are too lengthy for this chapter, and as much has been written on the subject, the student is referred to the literature.[6] Walls and ceilings may be painted with flat or gloss, oil or patent paint; the base may be plaster, composition boards or metal; tile and marble are often used, and each surface requires specific materials for effective cleaning. In floors we find wood, terrazzo, linoleum, composition, cork, cement, rubber and tile. A distinct method of cleaning is needed for each material and these methods should be carefully worked out. Moreover, the hardness and other chemical properties of water are subject to wide variation, according to the locality.

Equally important is the equipment used. Floor polishers, vacuum cleaners, mops, brushes, pails, brooms, wringers, sponges and rags are manufactured in numerous types, sizes and qualities, and the housekeeper should be trained in their selection and application. The care of this equipment also needs more than average attention. The reader is here referred to excellent volumes and monographs on hospital cleaning.[6, 7, 8, 9]

The Handling of Linen

Three major functions are carried on in the hospital linen room: the acquisition and issuance of new linen; the daily exchange of clean linen for soiled linen; the proper marking of new linen, general routine mending and plain sewing.

The methods for acquisition and distribution of linen depend to a great extent upon the nature and size of the institution. Buying should be by specification. The standard sizes outlined by the U. S. Department of Commerce and the American Hospital Association are recommended.[2]

In marking linen it is wise to date all pieces so as to check the life of the goods. It seems to be the general practice to have distinctive marks for the linens, as follows: ward, private, staff and service. Marking for each floor or each ward is too specialized. Staff, patient and servant linens can be differentiated by a distinct border design, to aid in sorting.

Seamstresses are usually employed to make children's and infants' garments and various medical and surgical pads, binders and covers, and this practice effects a marked saving.

A hospital blessed with a sufficient linen supply to meet emergencies is fortunate. Ideally, there should be enough linen in circulation for division into four equal parts, as follows: in actual use; in reserve in linen cupboards; in linen room; in process of washing.

This provides for emergencies and laundry breakdowns and guarantees a sufficient supply throughout the institution. Without such a system the practices of borrowing or hoarding arise and always lead to trouble and confusion. Some hospitals issue linen on an exchange system; a linen truck makes the rounds and exchanges clean for soiled pieces by actual count.

A complete inventory should be kept of linen and linen supplies, both in central linen departments and in individual units. Test checks of various sections should be made from time to time. Shelves should be labeled, goods stored and packed, according to unit sized packages, and arranged in some definite order or system. Reference schedules should be supplied.

There seem to be two definite schemes of laundry management in institutions, one recommending a separate department and the other having

Review Work

1. Choose some institution with which you are familiar and prepare a complete analysis for the housekeeper's job.
2. What would you include as the qualifications for a hospital housekeeper?
3. Make a salary budget for the housekeeping department of a 150-bed hospital.
4. What laundry and linen room records should be maintained?
5. Draw a floor plan for a small hospital laundry, and state what personnel would be necessary to operate such a laundry?
6. Study the comparative cost of a hospital doing its own laundry and the cost of having it done by a commercial laundry.
7. What materials and processes are required for: cleaning rubberized flooring; cleaning walls, flat painted; cleaning of windows; shampooing of rugs; care of garbage cans; removal of rust spots from linen.

the laundry under the control of the housekeeper. Arguments for and against can be stated. The decision depends upon local conditions in each hospital, including the training and experience of both the foreman of the laundry and the supervising housekeeper. The size of the institution also influences the type of organization, in the larger ones the laundry is often a separate department.

Certain basic equipment is found in every modern laundry, the number of machines increasing with the volume of work handled. For a certain hospital of 112 beds the installation is:

One 42″ x 54″ washer
One 28″ x 23″ solid head washer
One 30″ extractor
One 3-compartment stationary tub
One 30″ x 42″ drying tumbler
One 4-roll, 100″ ironer
Two presses
Three ironing boards

For a more complete discussion of laundry equipment, the reader is referred to THE MODERN HOSPITAL YEAR BOOK[3] and laundry reports in the proceedings of the American Hospital Association.[10] Rules for operating machines and preventing accidents should be posted in the laundry. Schedules of machine care should be established and instruction offered to the complete staff. L. Ray Balderston, Columbia University, New York, has excellently covered this subject.[5]

Management of Laundry

The importance of an efficient foreman in the laundry cannot be overemphasized. Poor results due to lack of technical skill in the foreman or to constant changing of laundry help cost exorbitantly. It is well for the laundry foreman, under the direction of the superintendent, to call in experts periodically for washing consultation. Proper washing formulae must be worked out to fit the conditions encountered.[6]

Infected linen and gauze are among the hospital's laundering problems. Some institutions sterilize all such articles before putting them through the usual washing processes; others consider the usual wash-wheel process sufficient and have evidently proved their point, bacteriologically. The student is urged to read the reports that are available upon this point.[6, 10] Usually, badly soiled linen should be soaked, off the ward, before being sent to the laundry.[11]

Every hospital superintendent hears numerous complaints concerning the laundry department because of torn linen, poor laundering and lost personal linen. Errors are apt to occur on both sides, and complaints should be carefully studied so as to prevent future trouble.

Removing Stains

No other class of linen is exposed to staining as is hospital linen. An excellent study of "stain removal" giving the character of stain, reagent and method of removing, has been prepared by L. Ray Balderston.[4] Directions similar to this study should be typewritten and posted in a conspicuous place near the washing department. Formulae for washing, souring, bluing and starching, also should be prepared.[6]

It is the established custom for hospitals to do a certain amount of personal laundry for employees. This should include only linen and cotton articles, and the privilege should be limited, according to departments. If silk or woolen materials are accepted by the laundry, the hospital should take no responsibility as to the outcome of the washing. While care should be maintained in the proper marking of all personal clothes and in proper delivery, it is not customary for the hospital to reimburse employees for clothes lost in the process of washing, unless losses are extensive and frequent.

Laundry Records

Records should be maintained of the date, quantity and quality of each new linen issue, and when old linen is discarded the life of the goods should be ascertained. A report should be made periodically to the superintendent. Inventories of all materials should be kept in active files. A monthly report of the volume of work handled and the cost of maintenance should be established. The laundry is one department that can show a definite unit cost of maintenance, and the efficiency of the department can be measured by dollars as well as service.

There are two phases of housekeeping and laundry management that give the hospital in general and the department head in particular no little concern, namely, the high rate of labor turnover and the difficulty of supervision, particularly in housekeeping, where the employees perforce cannot be closely supervised for more than a fraction of their working day.

The housekeeping department is required to man itself with an undependable and shifting type of employee. Successful housekeeping administration depends much upon the head's ability to "get along" with a great variety of personalities, mostly coupled to subnormal mentalities. No person, however intelligent, is satisfied with too many "bosses" and with ill-defined responsibilities. Much money, time and energy could be saved through a complete analysis of workers' jobs, so that all might understand their specific duties, and so that workers might not be called

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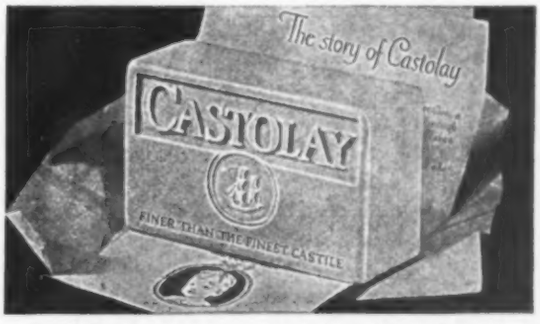

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here, there and everywhere to do any job. Orders should come only from the department head or the designated lieutenants, and if odd jobs are to be required, the employee should know it at the start.

What else can be done to eliminate this high turnover? Various methods are suggested—training new personnel, proper housing, recreational facilities, wage increase incentives, promotions when deserved, good food and systematic performance. The training of hospital employees promotes permanency and lowers expense. New help is expensive, both in time and in supplies, and systematic lectures on building and equipment maintenance, paint and painting, floor polishing and purchase and handling of supplies, inspire employees to improve their work and should reduce cost.

The success of an institution is judged not alone by the type of professional service rendered by the doctors and nurses, but equally by the kind of food served and by the general state of cleanliness and upkeep. The public pays little attention to administrative policies or programs. A clean house signifies good management; a dirty house, bad management. Good housekeeping and good laundering are major problems and must be as carefully checked as the efficiency of the medical service or the quality of the food.

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Exterminating Disease in New Guinea

From New Guinea comes a tale to prick the imagination. A savage tribe is being rapidly exterminated by a disease that has been finally diagnosed as *granuloma inguinale*, a malady that is more prevalent in America than was once thought to be the case. There seems to be no route of attack save the therapeutic. Undismayed, the Dutch government launches its campaign despite the unfavorable social customs of the tribe and the insanitation of their villages. In four years 5,736 patients have been treated in little improvised 100-bed hospitals; 134,328 intravenous doses of antimony tartarate have been given; the native villages are being reconstructed according to the standards of sanitation and personal hygiene is being taught. As a result, whole districts have been freed of the disease; elsewhere it is now sporadic where once it was epidemic.

Examine Your Fire Extinguishing Appliances

In winter particular care must be taken of the tanks and fittings in fire extinguishing appliances. They should be examined, whether they are for steam heating, general water service, or fire protection, to see that none is frozen or has been frozen, and that they are in operative condition. Where there is any danger of freezing, the necessary protection should be provided.

It is important to see that the tank heaters are of adequate capacity for the tanks they serve. Both heaters and circulating pipes should be cleaned of any rust or sediment; tanks also should be cleaned. Any pipe lines that may be in an exposed location, either between the ground and first floor, between buildings, or near windows, should have suitable boxing around them to keep them free from frost. Open joints or gaps in the boxing are a prolific source of trouble.

Getting 100 Per Cent Service from Your Lighting System

During the winter months, the lighting expense of the institution is naturally heavy, and hospital superintendents should take every measure to guard against undue light consumption, and to see that the greatest possible lighting efficiency is obtained.

It is common knowledge that incandescent lamps deteriorate, and as a result lighting efficiency is greatly reduced, and the current consumption is increased. This is particularly true of carbon lights, which use much greater current when old than when new. This deterioration can, as a rule, be easily detected by the eye without photometric apparatus, as the light has a yellowish cast, the surface of the globe becomes blackened or carries a dark deposit, while in some instances a deposit also occurs on the outside of the lamp bulb.

Another way in which lighting efficiency can be furthered is to inspect the lighting system carefully and see if lamps of proper size are being used. It will frequently be found that a lower candle power will give ample light for certain locations. In other words, the candle power of the electric light should be governed entirely by the conditions surrounding its use.

Another thing, be sure that the lighting fixtures are clean. This is no reflection on the housekeeper, because even in fixtures that appear clean there is frequently an accumulation of dust that greatly impairs the lighting efficiency. All lamps and reflectors should be regularly washed and cleaned. In the ordinary direct lighting reflector there is little opportunity for dirt to gather, and the lamp bulb will be the primary cause of light loss. In the case of the inverted unit, however, a thin layer of dust soon settles on the entire reflecting surface, as well as on the lamp, and this will reduce the lighting efficiency appreciably in a short time.

Another cause for faulty illumination is the condition of walls and ceilings. These should be carefully watched in rooms requiring brilliant illumination, such as operating rooms and laboratories. The paint and enamel gradually lose reflecting power, and many deficiencies in the lighting system may be due in part to the condition of the walls and ceiling, which should be redecorated when this is found to be necessary.

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Pure, fresh milk, produced in the best dairy sections of the country, received in scientifically sanitary plants within a few hours after it comes from the cow, concentrated and sterilized in sealed containers, the purity, freshness and safety of Evaporated Milk are both *protected* and *perfected.* The sterilization frees it from everything that could destroy its freshness —makes it free from anything that could harm health. The sealed can protects it from any possible contamination.

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For complete index of advertisements refer to the Classified Directory

YOUR EVERYDAY PROBLEMS

A department devoted to the informal discussion of problems arising in the everyday life of the hospital superintendent.

[No attempt has been made to offer final conclusions relative to the questions considered in this department. THE MODERN HOSPITAL will gladly welcome further comment by its readers on any of these problems, or the presentation of other queries for discussion in later issues.—Editor.]

Is the Daily Efficiency Record of Interns Necessary?

It is the requirement of at least one state board of medical education and licensure, that hospitals in the commonwealth in which this board operates shall keep a daily efficiency record of the intern's work. This record is expected to consist of a statement relative to the actual time consumed daily in performing various types of work.

This appears to be a rather useless waste of time on the part of the intern, who must at the conclusion of each day compile this statement for presentation to the superintendent of the hospital.

In the first place, intern assignments are usually made to cover a minimum period of two months. During this time, the intern is assigned to some general or specialty department. His work is, or should be, carefully supervised during this period. He should, until proved otherwise, be looked upon as an individual who is conscientious and truthful. Whether he is required to spend one or three hours doing dressings, or whether making rounds with his chief requires three hours or one, is inconsequential. At the conclusion of each period, a report should be submitted by the visiting chief, as to the nature of the intern's service. This statement can be supplemented by additional reports from resident supervisors, if deemed advisable, and by a notation on the intern's record card by the superintendent as to the institutional attitude of the physician in question.

To require a hospital to compile a daily report of the intern's work appears to be a refinement that is not justified. It should be sufficient at the conclusion of a one- or two-year service, for the hospital to be able to present the signatures of from six to twelve physicians, certifying as to the type of work performed by the intern, and, hence, the adequacy of his training.

Should the Record of a Patient Be Shown to Insurance Representatives or Members and Friends of the Family?

There is not a hospital superintendent in the land who has not encountered this problem on many occasions. Often unethical insurance companies seek to avoid the payment of proper death claims, by dispatching clerks to the hospital to endeavor to secure clinical evidence that will substantiate this action. The superintendent is often able to sense the object of such visits.

While the records of the patient are certainly the property of the hospital, the tactful superintendent will not always refuse information to well-meaning insurance companies when the interests of the patient or his family will not be endangered thereby. He is, however, perfectly justified in flatly refusing to produce records for the inspection of any one, and can only be required to do so upon proper court subpoena.

A little different aspect is given to this question when real or reputed friends of a patient ask for information in regard to his or her condition. Sometimes the acquisition of facts to favor divorce action, or to affect unfavorably the character or community standing of a patient, is the object of such an inquiry. Sometimes a request for the result of Wassermann or other laboratory study is made. Not only should the superintendent refuse to divulge any such information, but he should so forcefully express his decision to the inquirer, that he will leave no doubt as to his present or future action in such a matter.

It is not a difficult task for a hospital superintendent to separate a bona fide request for information, which, after all, should go to the physician in charge if the individual is a patient in the hospital, from those that have an unhealthy or harmful background. It has long been established that whatever information the institution has in regard to its patients is the property of the hospital, and is a confidential communication between the hospital physician and the patient.

How Can the Superintendent Regulate the Expense of the X-Ray Department?

This question was asked at an informal discussion of institutional problems at a recent hospital convention. Since no satisfactory solution was offered, THE MODERN HOSPITAL was asked to express an opinion on this vexing subject.

The expense of conducting the x-ray department in a general hospital is not inconsiderable. Sometimes in the laudable desire to pursue to the ultimate the study of the patient's condition, unnecessary x-ray work is requisitioned. Again, expensive, time-consuming scientific studies are carried on that cost many hundreds of dollars and that react to the detriment of the routine work.

It is feared that hospital interns and even sometimes visiting physicians, attempt to arrive quickly at a diagnosis by the use of the x-ray, without having carefully studied the patient by means of routine physical examinations. This trend is to be condemned, because it is not only unnecessarily expensive to the hospital, but also because it retards the acquisition of skill in diagnosis on the part of the young intern. Most young physicians, when they enter general practice, will not be able to call upon an x-ray department, upon the slightest provocation, for aid.

Some hospitals require that the visiting physician originate and sign every x-ray requisition. This is not always

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possible, or if possible, is likely to delay the treatment of patients. Other hospitals insist that a resident officer who has knowledge of the patient and his requirements, approve the x-ray request before it is forwarded to the hospital roentgen-ray department.

Some place the responsibility wholly upon the x-ray director. Others require that the superintendent of the hospital approve each requisition. Some have no regulations at all, every request which reaches the x-ray department being honored.

None of these systems is ideal. Perhaps it would be best to insist that the visiting chief sign each request sheet. But when this is done, the visiting physician not having intimate knowledge of the status of the finances of the hospital, may not be as economical as he should. Perhaps a resident medical officer who knows the details of the patient's condition, as well as the steps that have been taken to arrive at a diagnosis, is the best qualified person upon whom to place this responsibility.

If unusual, scientific studies are to be undertaken, which will require the exposure of many plates, the superintendent himself should be consulted. It is not enough for the patient to be able to meet the cost of x-ray study. Sometimes unnecessary work is done, which consumes so much of the time of the x-ray personnel that more essential work must be omitted.

The superintendent should certainly work out some scheme for preventing unnecessary work and facilitating desirable roentgen-ray studies. The x-ray director should not be required to perform the sometimes unpleasant task of refusing to honor requests that reach his department properly signed by staff physicians on duty.

What Is the Hospital's Obligation to Patients with Gonorrheal Ophthalmia?

A mother who had been discharged from the maternity department of a certain hospital returned three days afterward to the institution's dispensary, with her two-weeks-old child, whose eyes showed signs of purulent ophthalmia.

The hospital had an isolation department which had not been opened, and which, if this patient were admitted, would require the services of at least two nurses, and possibly a third to relieve them on their hours off duty. The superintendent asks whether she should be required to accept this patient.

Here is a problem that involves the responsibility of the hospital in regard to the treatment of an infection, which, through no fault of its own, arose within its maternity department.

It is a well known fact that much of the blindness which exists in the world today, originated as a result of a gonorrheal eye infection.

In this instance, the infection was probably present when the child was discharged. The physician advised this mother to stay in the hospital. She refused to do so. It would appear that this institution, no matter how irritated its physicians might have been at the stubbornness of an ignorant mother, should have keenly felt its responsibility to care for this infant. The mere fact that the mother had left the maternity ward against advice, had no bearing on the case. This mother and child should not have been allowed to depart with instructions to seek entrance to some other hospital for the care of the eye condition, because the hospital would be required to spend a certain sum of money in opening its isolation building. At least, it should have made certain, by sending a social worker with this patient, that the baby would be properly and promptly treated elsewhere. The cost of opening an isolation suite for a short period of time is small indeed when compared with the expense to the community of maintaining, throughout life, an individual afflicted with blindness, leaving the humanitarian aspect entirely out of the case.

It cannot be said that every hospital should establish a ward for the acceptance of gonorrheal ophthalmia. Each institution, however, should have some such provision, which could be used in an emergency. It can be emphatically stated that it is the duty of every institution in the land, once a distressing situation of the above type comes to its attention, to make it its business to see that the health of such a patient is properly safeguarded. If no hospital properly equipped for the acceptance of these patients is available nearby, then the institution having the first responsibility should care for such a child at whatever cost in time and money.

Should the General Hospital Admit a Case of Appendicitis Complicating Erysipelas?

This is one of the difficult situations that general hospitals must face from time to time. In some communities, particularly cities of the first class, a hospital for contagious diseases is equipped with operating room facilities. In such localities, this type of patient would not be taken to a general hospital.

It has been repeatedly stated that one of the faults of the average general hospital is lack of flexibility. As long as patients applying for admission fall into several general classes, no difficulty is encountered in caring for them. Should a complication of diseases similar to the above arise, however, many hospitals are either physically helpless, or at least so rigid in their methods of conduct that the admission of the patient is either long delayed or actually prevented.

Most hospital superintendents are of the opinion that it is the duty of the hospital to care for emergencies of this kind in some way. Sometimes a small ward dressing room is utilized for an operating room, and the postoperative treatment is given in a single room in the isolation department, or in some similar location.

A complication of erysipelas with pregnancy at term, or of a convalescent scarlet fever, with an otitis media with mastoid infection, represents another disturbing situation of this sort. The hospital should provide immediate surgical treatment in such cases, and it is felt that if caution is employed, this can be done in the average institution without endangering the welfare of others. At least when the existence of such a situation is brought to the attention of the superintendent, it is his responsibility either to admit the case promptly, or, in some way to aid in providing satisfactory treatment. A greater flexibility of service, as a result of the proper construction and equipment of hospitals, is much needed.

Should the Superintendent Always Patronize Local Fire Insurance Agencies?

This question was asked on the floor of a recent hospital convention. It is an interesting query, since it has a rather general application to many hospitals in the field. The inception and development of the mutual fire insurance idea have led to the organization of many such companies throughout the country. It is argued that by eliminating the agent's profit, such companies can offer insurance at a cheaper rate than the so-called old-line companies.

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THE MODERN HOSPITAL has on more than one occasion stated its belief that the board of trustees of the hospital owes a definite obligation to its contributors to purchase health restoring effort at as low a rate as possible. Because a community contributes to the support of the hospital, it does not always follow that that hospital should spend all of its money in purchasing from local merchants. These persons, if the proper appeal is presented to them, will probably agree to the fact that such a policy is of questionable wisdom.

It may be said, therefore, that all things being equal, it is the duty of the superintendent, acting for the board of trustees, to make each dollar render the greatest possible service to the patient. To do otherwise would be an injustice to him, and to the supporters of the institution.

Should the Superintendent Require That the Hospital Personnel Submit to a Physical Examination?

Preventive medicine in all lines of endeavor has advanced to such a stage that the hospital certainly should be in the van in carrying out its precepts. Physical examination of pupil nurses, and the correction of any discovered faults, as well as their immunization against certain contagious and infectious conditions, have long been matters of routine procedure in most hospitals. The examination of all those who handle food is of the utmost expediency. The examination of those working with machinery, such as firemen, machinists and engineers, seems wise because of the danger of compensation suits, should injuries to these individuals occur while at work. Physical examination of orderlies and attendants for the same reason, seems justified. Even hospital interns might be included, because of their exposure to infection, and because of the expense to the hospital, of prolonged illness on the part of members of its resident staff.

No general rule can be laid down for all hospitals, but it can be said that a periodic check-up on the physical status of all hospital employees would be a step toward increasing institutional efficiency. Certainly, as a minimum requirement, all those who handle food should undergo, upon beginning work, a physical examination, with the added performance of seriological studies. This should be repeated at three- or six-month intervals thereafter.

Should the Hospital Charge the Ward Patient a Less Than Cost Rate?

In some localities it is the belief of hospital administrators and physicians that unless a patient can pay the full ward cost, he should not be charged anything, in other words, that there should be but two classes of patients—full-pay and free.

There does not seem to be any rational justification for this policy. The hospital should not permit patients to secure something for nothing when they are able to pay at least a part of their hospital expense. It is not fair or wise to allow a patient to pauperize himself. Physicians sometimes contend that part-pay patients should not be accepted, because such an action is unfair to others who fully pay their way. It is also claimed that such patients, being able to pay something, may at times be treated in the physician's office and not in the hospital ward or out-patient department.

On the other hand, this problem does not affect the individual alone. It concerns the community as a whole. Patients who are required to pay are likely to appreciate more fully their treatment than do those who pay nothing. The self-respect of the former type of patient is maintained to a greater degree than is that of the latter.

There is no reason why a hospital should not require that the patient meet a part of the expense of his treatment, even though he is unable fully to meet this obligation.

Should the Hospital Pay the Dues of Its Superintendent in Local or National Associations?

Attendance at hospital association meetings results in a twofold benefit—to the superintendent himself and to the hospital whose affairs he administers. It is probable that often the latter reaps the greatest benefit. Most institutions feel that the expenditure of money to send its administrator to hospital association meetings, is a wise step. If this is true, to make such an attendance of the greatest benefit to the superintendent and his hospital, by paying the executive's dues to the association, is but a slight step forward. Even better than this, would be the enrollment of the hospital as an institutional member and the appointment of its executive as the hospital's official representative.

It is a short-sighted policy indeed, to adopt any measure that prevents the attendance of the superintendent at national and local hospital association meetings. The return the institution gains from such visits will far outbalance the expense necessary to bring this about.

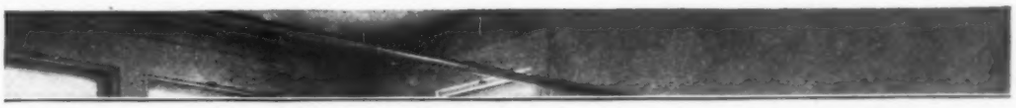
Has the Electric Stethoscope Developed to a Point Justifying Its Purchase by the General Hospital?

Of all the useful scientific instruments that modern invention has developed, the electric stethoscope represents one of the most advanced types. There is no question but that it is of great aid in teaching students the new science of cardiology. It is also of great use to the investigator in the study of the methods of production, as well as the timing of normal and abnormal heart sounds. By correlating this information with that furnished by the electrocardiograph, much has been learned relative to the diagnosis, prognosis and even treatment of cardiac defects.

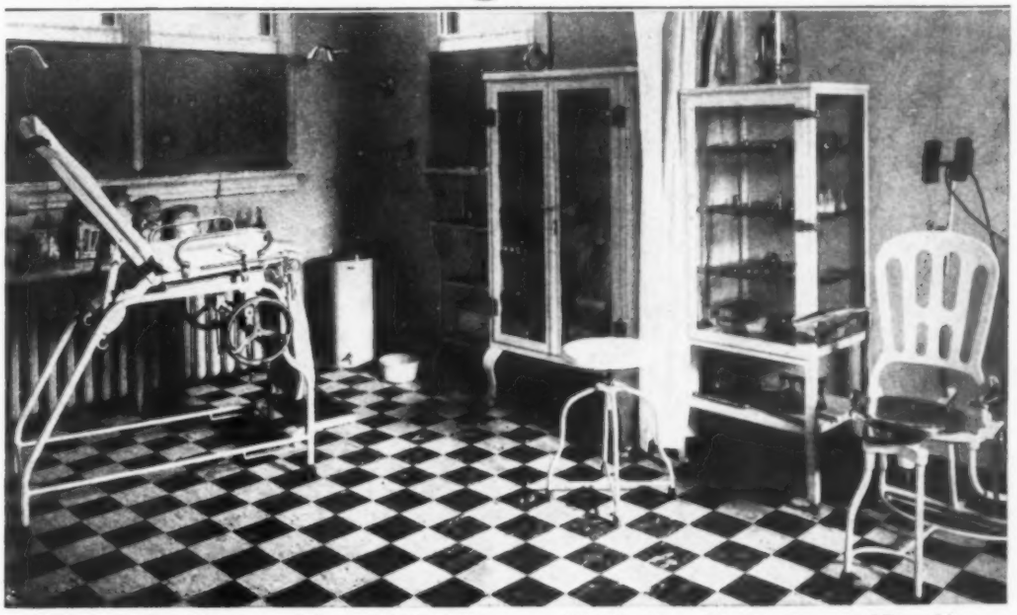
But the expense of this instrument is not inconsiderable. The general hospital has such demands upon its funds for things which, while of less scientific refinement, are of greater practical value, that it must hesitate to expend several thousand dollars in procuring such an instrument. With the teaching institution, particularly one connected with a school for medicine, the situation is different. Where large classes are to be instructed in diseases of the chest, the electric stethoscope finds its best field. Here, with properly wired amphitheatres, a hundred or more students may listen to a heart murmur which has been relayed to their seats with almost, if not quite as much satisfaction, as if each were at the bedside listening through his own stethoscope.

The advantage of this method of teaching needs no elaboration. If the finances of teaching institutions can permit the purchase of such instruments of precision, there can be no arguments against the expenditure of this money.

It would be a fine thing, indeed, if wealthy members of communities in which are hospitals possessing a scientific atmosphere, should appreciate the elevation of morale that the installation of fine equipment always brings, and present to such institutions instruments of precision that will aid in the diagnosis and treatment of their patients.



Cleanliness begins at the floor



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How Administrators Can Influence the Presentation of News

NEWSPAPERS frequently carry stories on the discovery of a new "cure" for some disease or on a new method of treatment that has proved successful in experiments. Medical men may be informed of the discovery by the newspaper story, but they wait for a more intelligent and comprehensive account on which to base their opinions and their professional conduct. Not so the public, which probably never learns any more about the "cure" than is related in the newspaper, and on that account false hopes are cherished and steps are often taken that lead to disappointment and disaster.

How are such stories generally handled by newspapers and what part can hospital administrators play in effecting a more intelligent presentation of the story? If the story is local, that is, if it originates in the city in which the newspaper is published, the greatest care should be taken that the information given the newspaper is accurate and judicious. The reporter who receives the story may be able, but he is not trained in medical science. The medical man should be careful that the reporter is given the scientific viewpoint, careful that the meaning of the discovery and its limits are made plain. He should warn the reporter against exaggeration and admonish him not to go too far in the prediction of success. The caution of the scientific man should be injected into the story. However, this should not be carried so far that the reporter has nothing to work on, for in such case he may "interpret" the story and exaggerate the significance of the discovery. He must get the story, and it is better to help him than to leave him to his own devices.

Prepare News Carefully

The local story may be of considerable length as newspaper stories go, but when it is "put on the wires" for national consumption, via the news services, it must be "boiled down." It has also to be edited at various points and therein lies another danger. The original story may be accurate but a succession of editors taking out a word here and there and slashing out whole paragraphs can entirely change its meaning, while believing that they have not distorted the story. "What is believed to be a significant discovery in connection with the treatment of diabetes," may be made to read "discovery assures cure of diabetes," which isn't at all what the discoverer intended the account to convey. Naturally medical men are wary of such news treatment.

First, then, care must be exercised in giving out the original story, remembering that it will probably be cut repeatedly as it circulates, and be subjected to more or less promiscuous handling by editors who are not of a scientific turn of mind. For this reason, the original story should be so presented to the newspaper man that it will stand some cutting.

This is not a one-sided proposition. It is the newspaper's duty to have men who are able to handle such stories intelligently. A scientific man can be little blamed for refusing to give out news to the type of person often sent to get the story from him.

Second, what part can the hospital executive play in this matter? If a newspaper in Columbus, Ohio, receives over the wire a story from Portland, Ore., stating that a new discovery has been made in the treatment of influenza, the local staff of the paper may ask one or more hospital managers for an opinion. Naturally, these hospital managers are loath to express an opinion without study or full knowledge of the discovery. But they can t ll the newspaper that it is impossible to judge the merit of the discovery until it has been tried extensively. They can also offer some explanation so that the public will understand what the discovery involves and can make it plain that it is a discovery that is being discussed and not an established and approved method of treatment. They can see to it that the story the newspaper carries is presented in its true and scientific light.

Hospital managers can go farther. They can establish such relations with managing and city editors that when such stories come into the newspaper office, editors immediately turn to the hospital manager for aid and advice. Such is rarely the case now. The wariness of the scientific man and his often sad experience with newspapers have made the relation more or less strained in most cases. Hospital managers probably better than anyone else can show newspaper men the importance of carefully handling news of medical science. Newspaper men will be quick to see the wisdom of such a procedure.

Of course it is asking a good deal of the hospital manager that he should add to his manifold duties that of editorial adviser. However, he is in the best position to help and by so doing can influence the newspapers to handle such news differently.

Various syndicates and services offer newspapers stories on medical science. Foundations have been established for the dissemination of scientific knowledge, and each hospital manager in each community has the opportunity to censor and criticize such services. If the hospital manager is on the proper footing with the newspaper, such criticism will be appreciated. If hospital managers offer newspapers their services in this way the offer will be well received and when a hospital manager sees a story unintelligently or incorrectly handled, he will probably not offend the newspaper by calling its attention to that fact.

How to Buy Milk

Most hospitals now buy milk under contract and in this they demand milk of a certain butter fat. Some hospitals pay no further attention to the tests and assume that they are getting what they ordered. This was the case in a Minnesota hospital until a new superintendent came in and made a test of the milk as it was delivered. He found a shortage of butter fat and reported this to the supply house. They disclaimed any knowledge of the cause for it but agreed to make an investigation. They learned that the driver had been removing and selling some of the cream. In his confession the driver admitted that he had been doing this for six months.

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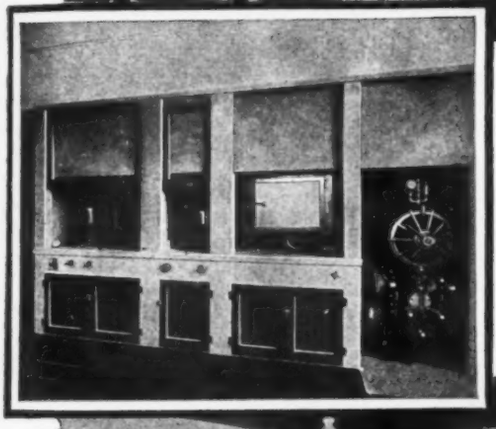

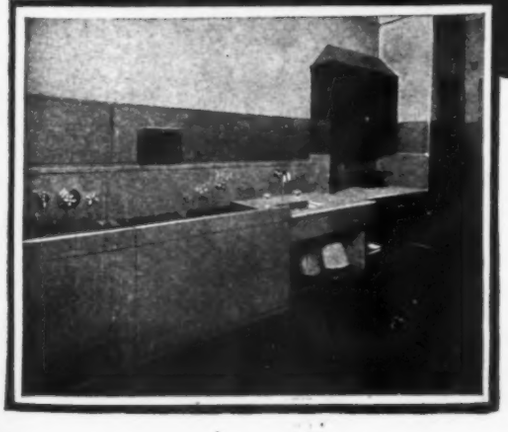

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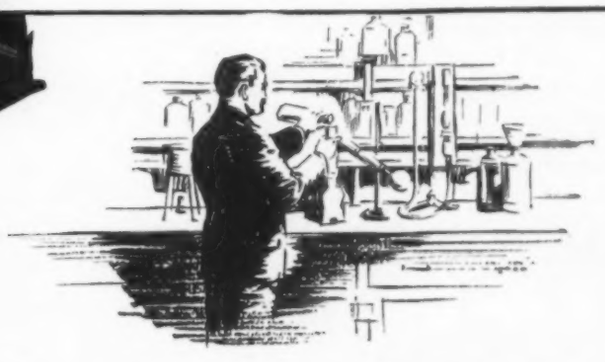

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NEWS OF THE MONTH

Gifts Open Way for Children's Clinic at U. of Chicago

It has been announced that the Home for Destitute Crippled Children, Paulina Street and Maypole Avenue, Chicago, will be moved to the campus of the University of Chicago and made part of a university clinic for children.

This step has been made possible through two gifts aggregating $600,000. A gift of $300,000 from Mrs. Elizabeth S. McElwee will provide for the building of a home for crippled children, to be called the Nancy Adele McElwee Memorial, in memory of the daughter of Mrs. McElwee. Another gift of $300,000 from Mrs. Gertrude Dunn Hicks, made to the university last September for an orthopedic hospital, is to be used for the erection of the other division of the home. This building will be known as the Gertrude Dunn Hicks Memorial.

The new buildings, which will be in operation by the summer of 1929, will provide 100 beds. The home will continue to operate the hospital but the university is to provide medical and professional care. The treatment of the children will be accompanied by research and training of specialists. Part of the present building of the home will be maintained as an emergency hospital and free dispensary for the west side.

1927 Is a Record Health Year

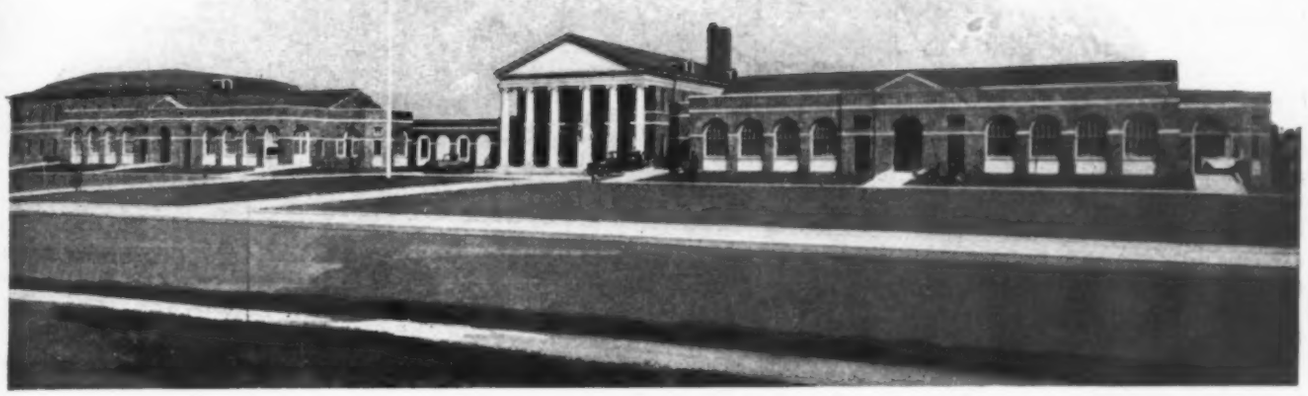
Although the exact death rate for 1927 has not yet been disclosed, the Metropolitan Life Insurance Co., New York, has announced that there will be three outstanding items in the mortality record of the year. Two of them are definitely favorable; one of them is unfavorable.

Most important of all is the certainty that the general death rate (that is, the mortality from all causes combined) in the industrial population of the United States and Canada, for 1927, will be the lowest ever reported. The most important factor in bringing this about was the approximate halving of the mortality from influenza as compared with 1926, with an accompanying decline in the pneumonia death rate.

Of almost as much importance is the fact that the death rate from tuberculosis will reach a new low point in 1927. There will be shown a decided gain over the former minimum, established in 1925, and the death rate will fall to a

(Underwood and Underwood)

On the left is shown the main building of the new Columbia-Presbyterian Medical Center, New York, the largest medical center in the world, occupying a plot of twenty acres. The first unit, one of eleven, will be opened March 1.



A Barrett Specification Roof protects The Shriners' Hospital for Crippled Children, Springfield, Mass.
Architect: Hentz, Adler & Shutze, Atlanta, Ga.; Associate Architect: Max H. Westhoff; Contractor: Ernest F. Carlson, Both of Springfield. Roofer: H. C. Sheaffer Co., Inc., West Springfield, Mass.

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Long-life is assured! When a Barrett Specification Roof is laid, a Surety Bond is issued guaranteeing the building owner against repair or maintenance expense for the next 20 years.*

And after the guaranteed period, what?

The question is answered by scores of old Barrett pitch and felt roofs laid in the 70's, 80's and 90's. (You will remember the pictures of a number of these old-timers featured in our advertising during the past year.) Not once, but again and again, we were able to point to veteran Barrett Roofs —30, 40 and even 50 years old— that had never cost owners one cent for repairs or maintenance and which are still good.

Built of the finest waterproofing materials — Barrett Specification Pitch and Felt. Built with scientific care by a Barrett-approved roofer, with a Barrett Inspector checking up on every detail of construction. Is it any way surprising that Barrett Specification Roofs far outlast their guaranteed period—that they are roofs that can be laid and forgotten?

For full details on these trouble-free roofs, dictate a brief note to us.

*The Barrett Company also offers a Specification Type "A" Roof which is bonded for 10 years. This type of roof is adaptable to a certain class of buildings. The same high-grade materials are used, the only difference being in the quantities.

A Valuable Service

Why not have a Barrett Service Man inspect and give an unprejudiced report on the roofs of your hospital. This he does without charge or obligation. His report on conditions and upkeep methods often saves expensive repairs.

This free inspection service applies to hospitals located east of the Rockies and having a roof area of 5,000 square feet or more.

Address Inspection Service Department.

THE BARRETT COMPANY
40 Rector Street, New York City

IN CANADA:
The Barrett Company, Limited
5551 St. Hubert Street, Montreal, Quebec, Canada

Barrett Specification Roofs

News of the Month

point that would have been called visionary if anyone had ventured to predict it even a decade ago. In 1911, when the Metropolitan Life Insurance Company began to keep statistical records of the mortality among its industrial policyholders, according to individual causes of death, the tuberculosis death rate was 224.6 per 100,000 persons insured. The indications are that the rate for 1927 will be not much in excess of 90. If that figure is attained we shall have a 60 per cent decline within a period of seventeen years, one-half of which has been recorded within the present decade. If comparisons are restricted to white persons the decline is even more impressive.

But while the year will register a remarkable record from the standpoint of public health, it will show no progress in public safety. All fatal accidents, considered as a group, will show a death rate which will not differ much from that of 1926 or, for that matter, from any of the four years immediately preceding; but there have been more accidental drownings this year, and still another rise will be in evidence in the death rate for automobile accidents. For the last named item the year-to-year record grows worse and worse. There will also be a considerable increase in the suicide death rate in 1927 and a small rise in that for homicides.

These items are based on the cumulative death rates of more than eighteen million industrial policyholders of the Metropolitan Life Insurance Company, calculated up to December 3.

Construction of New Passavant Hospital Starts

On February 7 ground was broken for the new $1,500,000 Passavant Memorial Hospital, on the McKinlock campus of Northwestern University, Chicago. Mrs. Joseph G. Coleman, head of the Ladies' Aid Society of the hospital, turned the first bucketful of earth in the excavation for the new building.

Research Foundation to Be Established at Hospital in Pittsburgh

The board of trustees of Saint Margaret Memorial Hospital, Pittsburgh, announces a gift of funds to establish a laboratory for clinical and biologic research to be known as the John C. Oliver Memorial Research Foundation. The donor is Mrs. John C. Oliver, Sewickley, Pa.

The gift will provide generously for the equipment and maintenance of such a department in the hospital. A full time biochemist will be in charge under the direction of a committee from the staff, comprising Dr. Paul Titus, Dr. Ernest W. Willetts and Dr. Charles J. Bowen. The new department will not take part in routine laboratory work of the hospital, but will be available to the entire medical staff for research on any general medical problem. Saint Margaret Memorial Hospital was founded by John Hopson Shoenberger and is conducted under the direction of the Episcopal Diocese of Pittsburgh.

Kings County Hospital to Expand

As the result of the recommendations of a special committee recently appointed to investigate conditions at Kings County Hospital, New York, the New York City Board of Estimates has voted an immediate appropriation of $350,000 toward the building fund for the new hospital, the enlargement of which will necessitate an expenditure of $6,325,000. The committee recommended that the main building be replaced; that the service building be remodeled; that additions be made to the boiler plant, and that the women's chronic cases building be immediately evacuated and demolished, the 260 patients being transferred to other city institutions.

Dr. S. S. Goldwater, consultant, New York, and Leroy P. Ward, architect, New York, have been appointed to prepare plans for the new buildings.

Eye and Ear Hospital to Start Building Soon

After raising funds for three years, the Brooklyn Eye and Ear Hospital, Brooklyn, N. Y., is ready to build its $1,000,000 building, according to Dr. William Snyder, chairman of the building committee. The structure with its equipment will represent an investment of nearly $1,500,000. Its capacity will be three times that of the present hospital.

The site, which is 200 by 95 feet, was purchased six years ago for $135,000 in separate parcels, and is regarded as an ideal location. It is on a comparatively quiet street and near transit facilities. The building will be seven stories high. The first two stories will be finished in white stone. The walls will be of brick. On the ground floor will be an operating room, laboratories, board room, offices, the ear and throat department and administrative quarters. A research department for special work will be established. The upper floors will house special wards, suites, operating rooms, x-ray laboratories, supply rooms and kitchens.

More than 100,000 persons are treated at the Brooklyn Eye and Ear Hospital each year, and for twelve years the hospital has been self-supporting, the only drive ever conducted being for the new building now developing.

Relations of O. P. D. and Welfare Agencies Discussed

Methods of securing more efficient cooperation between the out-patient departments of hospitals and outside welfare agencies were discussed at a recent meeting for clinic workers at the Brooklyn Chamber of Commerce, Brooklyn, N. Y. The meeting was one in the series under the auspices of the associated out-patient clinics committee of the New York Tuberculosis and Health Association, New York, and the North Atlantic district of the American Association of Hospital Social Workers.

St. Luke Hospital, Addition, Chicago.
Chas. S. Frost, *Architect.*
Neiler, Rich & Co., *Engineers*
Equipped With Johnson Temperature Control.

ANOTHER expressive example of the important regard for The Johnson System Of Temperature Control . . . . St. Luke Hospital, Chicago, Illinois. The original building was equipped with Johnson Control many years ago . . . . this new addition, completed in 1924, was likewise equipped with Johnson Temperature Control—300 room thermostats operating 450 radiator valves. Repeated evidence like that ought to induce you to install JOHNSON TEMPERATURE CONTROL. Complete details will be furnished you on request.

JOHNSON SERVICE COMPANY . . . . . MILWAUKEE, WISCONSIN
AUTOMATIC TEMPERATURE REGULATION SINCE 1885 BRANCHES IN ALL PRINCIPAL CITIES

News of the Month

Both sides of the question were frankly discussed. John R. Howard, Jr., superintendent, New York Nursery and Child's Hospital, New York, spoke of the predisposition on the part of social workers to pigeonhole agencies according to the result of one or more contacts. He urged all family welfare agents to assume that every dispensary wants to give each patient a kind welcome, a sympathetic hearing and a scientific examination, and will be glad to be notified of instances where this is not done.

Both Mrs. Helen C. White, Charity Organization Society, and Mr. Howard urged the vital need of mutual understanding, which is only possible through frequent conferences and the frank discussion of mutual problems.

Charles F. Neergaard, a member of the board of trustees, Brooklyn Hospital, Brooklyn, N. Y., and chairman of the housing committee of the Brooklyn Bureau of Charities, said that the cooperation of hospital and agency involved, first, policies that are mutually helpful and, second, the proper personal relationship between workers. He said he thought both were working toward better understanding and more helpful cooperation.

Louise S. Bryant, Ph.D., Committee on Maternal Health, presided at the meeting.

University of California to Build Students' Infirmary

Construction of the new $350,000 students' hospital on the campus of the University of California, Berkeley, Calif., will begin in February, it is expected. It will contain between ninety and 110 beds, with an adequate dispensary, and will be provided with modern equipment. The cost is estimated at $350,000. As soon as the new structure is built, the present infirmary will be demolished.

Minneapolis Hospital to Start New Unit in Spring

Construction of a new unit for St. Mary's Hospital, Minneapolis, Minn., will start this Spring, it has been announced by Sister Leo, superintendent of the hospital. The new unit will be a nurses' home to house 200 nurses and to cost about $400,000.

The new structure will be built by the Sisters of St. Joseph, on property now owned by the Sisterhood. The unit will be six stories high, and will conform with the architectural style of the hospital.

Akron City Hospital to Expand

Plans are being completed for an $800,000 surgical pavilion for the City Hospital of Akron, Akron, Ohio. A sum of $300,000 has yet to be raised to complete the financing of this project, and H. S. Firestone has announced that provided the community raises this amount before May 1, Mrs. H. S. Firestone will give to the hospital $300,000 for a new nurses' home, and an additional sum of $50,000 for furnishing it.

Demand for Tuberculosis Beds Is Increasing

The following has been received from Thomas B. Kidner, New York:

Nothwithstanding the gratifying decrease in the death rate from tuberculosis in the past two decades, the demand for tuberculosis beds in hospitals and sanatoriums is increasing. This is probably due to two factors: first, the greater knowledge of tuberculosis and improved methods of diagnosis, which, side by side with the better organization and increase in the number of case-finding agencies, has led to the discovery of a greater number of cases; and, second, the great improvement in the type of buildings and equipment provided in tuberculosis hospitals and sanatoriums in recent years.

In a report recently presented to the Tuberculosis Sanatorium Conference of Metropolitan New York, by its consulting statistician, the following significant figures occur regarding the greater use of tuberculosis beds in 1927:

"On January 1, 1928, there were in hospitals and sanatoriums, in the metropolitan area alone, 313 vacancies, or only 8 per cent of the total beds unoccupied. A year ago, the vacancies in these same institutions amounted to 519 or 14 per cent, and at the end of 1925, the vacant beds were 15 per cent of the total available. Furthermore, on January 1, 1928, an excess of seventy-six patients was reported in four institutions, forty of these at the Metropolitan Hospital, and some excess beds were in use in every one of the Catholic institutions.

"The greater demand at present for hospital and sanatorium beds can be more specifically visualized by comparing the percentage of vacancies at the end of 1927 with the number at the end of 1926 at particular institutions. For instance, at Otisville Sanatorium, at the end of 1927, 13 per cent only of the beds were vacant as compared with 25 per cent the year before on the same day; at Sea View Hospital, 8 per cent vacant as against 13 per cent of the year previous; at Bellevue Hospital, 20 per cent vacancies as against 31 per cent, even though the ward service has been materially enlarged there; at Montefiore Hospital, 2 per cent only as against 14 per cent formerly; at St. Anthony's, 4 per cent vacant beds, against formerly 19 per cent. Furthermore, of the 313 vacancies on January 1, 132 were beds for children."

Spend $1,100,000 in 1927 to Improve Health of Children

Expenditures of $1,100,000 were made in 1927 by the Commonwealth Fund, New York, to improve the physical and mental health of children, the recently issued annual report shows. The Fund was established in 1918 with a gift of $10,000,000 from the late Mrs. Stephen V. Harkness.

Other gifts for hospitals, educational and welfare work brought the total of the year's expenditures to $1,953,557. The capital endowment of the Fund at this time totals $38,000,000.

Does the case management call for a carbonated beverage? If so, prescribe "CANADA DRY"

THIS fine old ginger ale is liked by patients. It has a delicate, alluring flavor calculated to please and stimulate the most laggard appetite. In fact, it is admittedly the most palatable ginger ale that is made in this country.

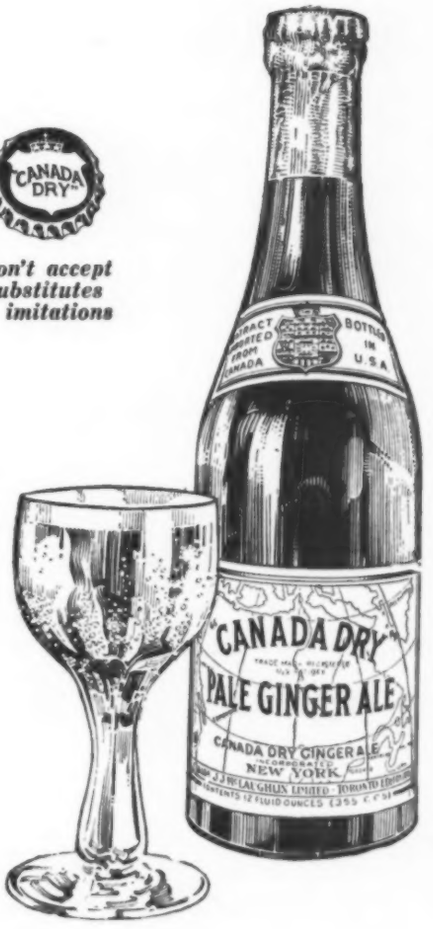
In prescribing it you may be sure it is really good for the patient, for "Canada Dry" is as pure as it is humanly possible to make it.

Its ingredients are selected with great care to insure their quality and purity. They are blended in exact proportions and these proportions are never allowed to vary. Constant watchfulness prevents that. "Canada Dry" contains pure, finest quality Jamaica ginger and other absolutely pure ingredients. A secret method of carbonation insures uniformity and enables "Canada Dry" to retain its sparkle long after the bottle has been opened.

But most important of all, "Canada Dry" does not contain capsicum (red pepper). That is why it does not bite the tongue or leave an unpleasant after-effect. Leading hospitals serve it! . . . Many physicians prescribe it. It is a pure beverage, and one pleasing to patients.

CANADA DRY

Don't accept substitutes or imitations



"CANADA DRY"

Reg. U. S. Pat. Off.

The Champagne of Ginger Ales

Extract imported from Canada and bottled in the U. S. A. by Canada Dry Ginger Ale, Incorporated, 25 W. 43rd St., New York, N. Y. In Canada, J. J. McLaughlin, Limited. Established 1890.

(C 1928)

Personals

ELLISON CAPERS has been elected superintendent of the Columbia Hospital of Richland County, Columbia, S. C., succeeding DAVID M. GIBSON, resigned.

DR. T. R. PONTON, formerly superintendent of the Hollywood Hospital, Los Angeles, Calif., is now associated with the Gorgas Memorial, Chicago.

DR. SHELDON STRINGER, in charge of the Gordon Keller Memorial Hospital, Tampa, Fla., from 1910 to 1920, is the new superintendent of the Tampa Municipal Hospital, Tampa, Fla.

ALICE M. ELLIS, R.N., recently resigned the superintendency of the Liberty Hospital for Women, Brooklyn, N. Y., and has assumed the office of superintendent of nurses at Shorewood Hospital, Milwaukee, Wis.

SOPHIA WILSON is the new superintendent of St. Margaret's House, Albany, N. Y.

MRS. ANN STRAYER has been appointed superintendent of the new hospital, now nearing completion, at the Franklin County Home, Columbus, Ohio.

DR. FRANK S. WILCOX has tendered his resignation as superintendent of the Norwich State Hospital, Norwich, Conn., effective April 1.

BERTHA S. LARSON, superintendent, Charlevoix Hospital, Charlevoix, Mich., recently resigned because of poor health.

DR. CLARENCE A. BONNER is the new superintendent of the Danvers State Hospital, Hathorne, Mass.

JOHN D. TABER was recently appointed superintendent of the Louisville City Hospital, Louisville, Ky., to succeed CHARLES W. MILLIKEN, resigned.

DOROTHY SLOANE has recently been appointed superintendent of the Ludlow Hospital, Ludlow, Mass. MISS SLOANE has been connected with the hospital for the past five years.

MAJOR E. W. PATTERSON, formerly superintendent of the Gallinger Hospital, Washington, D. C., died recently after a prolonged illness.

DR. ROBERT E. GARRETT has been formally installed as superintendent of the Spring Grove State Hospital, Catonsville, Md., where he has been acting superintendent, succeeding DR. J. PERCY WADE, resigned.

IDA ENGLE, bookkeeper and office manager of the Washington County Memorial Hospital, Bartlesville, Okla., since its opening six years ago, was recently appointed superintendent of that institution, following the resignation of HELEN WARK.

SISTER AQUILINA has recently been named Superior at St. Mary's Hospital, Hoboken, N. J., to fill the vacancy caused by the death of SISTER JOLENTA.

GEORGE WILLIAMS has been appointed superintendent of the Southern Idaho Mental Hospital, Blackfoot, Idaho.

FRED J. LOASE recently resigned as superintendent of the Flower Hospital, New York.

DR. JOHN S. CHADWICK has been appointed superintendent of the Methodist Memorial Hospital, Montgomery, Ala., to succeed REV. J. R. MILLS who resigned to reënter the ministry.

ELLEN MCINTYRE recently assumed the superintendency of the Meriden Hospital, Meriden, Conn.

DR. Z. M. LAUGHLIN is the new superintendent of the Menominee Indian Mills Hospital, Neopit, Wis.

DR. EDWIN O. PALMER has been appointed superintendent and business manager of the Hollywood Hospital, Los Angeles, Calif.

MABEL O. HERTSGAARD is the new superintendent of St. Luke's Hospital, Fargo, N. D.

MRS. LETA S. MAYNE, R.N., has resigned as superintendent of the Grand Island General Hospital, Grand Island, Neb.

ALBIA M. ROWAN, R.N., has recently been appointed superintendent of the Memorial Hospital, Jackson, Tenn.

E. L. SLACK, formerly superintendent of the Sutter Hospital, Sacramento, Calif., has recently accepted the superintendency of the Samuel Merritt Hospital, Oakland, Calif.

R. D. BRISBANE, formerly superintendent of the San Jose Hospital, San Jose, Calif., has recently accepted a similar position at the Sutter Hospital, Sacramento, Calif.

DR. LEON D. WILBOR is now superintendent of the San Francisco Hospital, San Francisco, Calif., succeeding DR. E. B. FRICK who resigned recently because of ill health.

H. G. HARCROW has recently been appointed superintendent of the Baptist State Hospital, Little Rock, Ark., succeeding H. B. CHRISP, who has been temporary head of the institution pending the appointment of a superintendent.

W. MAE KIRKLAND has recently been appointed superintendent of the Edga Hospital, Troy, Ala.

JUDITH CORNELL has recently assumed the superintendency of the Methodist Episcopal Hospital, Norton, Kans.

MRS. FLORENCE RUGELY has recently been appointed superintendent of the City-County Hospital, El Paso, Tex., succeeding ALPHA BLACK, R.N., resigned.

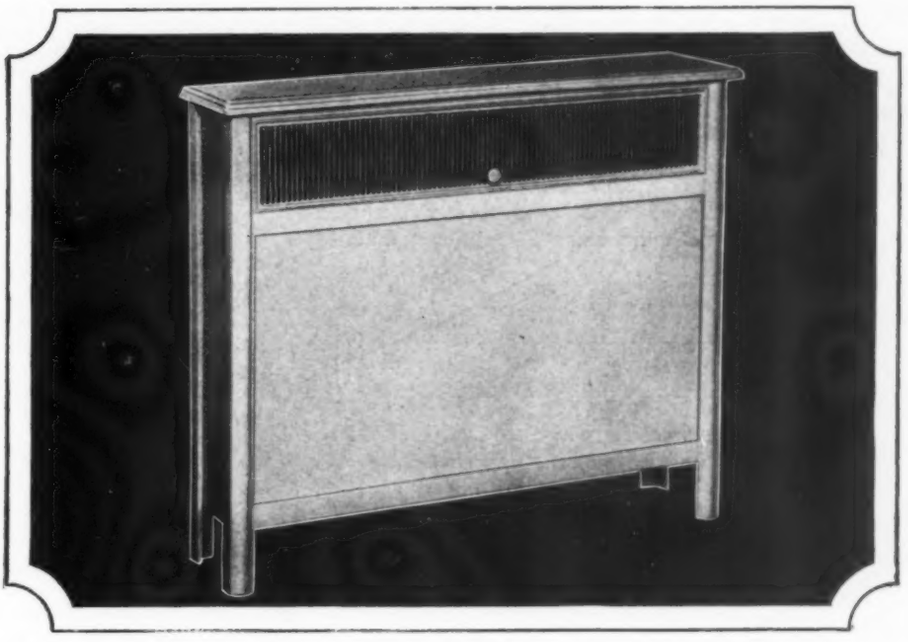
DR. FRASER D. MOONEY has been appointed acting superintendent of the Buffalo General Hospital, Buffalo, N. Y. DR. FRASER was assistant to the late Dr. Ross for two years.

DR. JAMES B. GRIFFIN, superintendent of the Flagler Hospital, St. Augustine, Fla., for the past three years, recently resigned to resume active practice.

DR. JAMES Q. FOLMOR has recently been appointed superintendent of the Florida State Hospital, Chattahoochee, Fla.

DR. T. DWIGHT SLOAN, formerly superintendent of Lakeside Hospital, Cleveland, Ohio, has recently been appointed superintendent of the New York Post-Graduate Medical School and Hospital, New York.

The Thermodine Cabinet Heater



The Latest Contribution to Better Hospital Heating!

THE THERMODINE CABINET HEATER brings to the hospital *modern heating.* Replaces old fashioned, cast iron radiation — unsightly, unsanitary and inefficient.

The Thermodine presents an entirely new principle in heating. It is a complete self-contained heating unit — not merely a cover or shield for cast iron radiators. It is successfully used with any type of steam, vapor, vacuum or hot water heating system. The Thermodine Cabinet Heater is ideal in place of radiators in any room because it offers:

Great Heating Capacity—Heats by convection, delivering heat out into the room, not into adjacent walls.

Healthful Heat — Every Thermodine Cabinet Heater is equipped with a humidifier or water pan. Provides proper moisture for healthful heat. Humidifier is concealed in the cabinet, provision is made for convenient filling.

Quicker Heat Regulation — Instant heat regulation is obtained with the Thermodine damper control. Open damper and heating starts immediately.

Sanitation — Thermodine Cabinets are easily lifted from the heating section as illustrated, and floor around section thoroughly cleaned. Smooth cabinet surfaces assure easy washing. Furthermore, the outward direction taken by the heated air eliminates wall and ceiling smudges.

Beauty — Thermodine Cabinets are furnished with priming coat only. They may be decorated to harmonize with the fixtures in the room. New beauty is thus given to hospital rooms.

Cabinet easily removed for quick, thorough cleaning.

Showing details of construction — also how air is circulated through cabinet.

There are many other features of Thermodine Cabinet Heaters that warrant your investigation. Let us tell you more about this modern heating development to replace cast iron radiation. *Write today for Catalog No. 327.*

MODINE MANUFACTURING COMPANY
1721 Racine Street (*Heating Division*) Racine, Wisconsin
Branch Offices in All Large Cities.

ThermoDine

Cabinet HEATER

A MODINE Product

FOR STEAM. VAPOR. VACUUM. HOT WATER HEATING SYSTEMS

For complete index of advertisements refer to the Classified Directory

News of the Month

DR. F. P. BAKER, formerly assistant superintendent of the Arkansas Tuberculosis Sanatorium, Booneville, Ark., has recently been appointed superintendent and medical director of the Eastern Oklahoma Tuberculosis Sanatorium, Talihina, Okla.

DR. MICHAEL A. CUNNINGHAM, formerly assistant superintendent of the State Tuberculosis Sanatorium, Oakdale, Iowa, has been appointed medical director of the Holy Cross Sanatorium, Deming, N. M.

DR. WARREN B. SANBORN, formerly medical examiner for Kennebec County, Me., is the new superintendent of the Augusta State Hospital, Augusta, Me.

DR. RODERICK B. DEXTER was recently appointed chief executive officer of the Boston Psychopathic Hospital, Boston, Mass., succeeding DR. CHARLES A. BONNER.

DR. ALBERT STRICKLER, professor of dermatology and syphilology at Temple University School of Medicine, has been appointed medical director of the new Skin and Cancer Hospital recently organized in Philadelphia.

DR. GEORGE HARVEY AGNEW, Toronto, Ontario, has been appointed associate secretary of the Canadian Medical Association, hospital service department. The new department was made possible by a grant from an insurance company and will assist Canadian hospitals with information and advice.

DR. CHARLES R. WOODSON, formerly medical superintendent of the Woodson Sanatorium, St. Joseph, Mo., and superintendent of State Hospital No. 2, St. Joseph, Mo., for seventeen years, died recently.

Father Bourke Dies at Ann Arbor

Rev. Father Michael Patrick Bourke, aged fifty years, died February 14, at Ann Arbor, Mich. Father Bourke was well known to administrators of hospitals throughout the United States and Canada and was the hospital administrator of the Catholic hospitals in the diocese of Detroit. He was a prominent member of the Michigan Hospital Association and had prepared, with Dorothy Ketcham, University Hospital, Ann Arbor, Mich., a digest of the hospital laws affecting the hospitals of Michigan. His counsel on legal matters was often sought by Michigan hospital superintendents and by the Catholic hospital administrators in all parts of the country, on account of his legal training, previous to entering the priesthood.

Minnesota Dietitians Meet in St. Paul

The Minnesota Association of Hospital Dietitians held their January meeting at the Purity Bakery, St. Paul. The program was as follows:

Trip through bakery, dinner at six o'clock after which members of the Purity Staff spoke on the following subjects: Commercial Bread versus Homemade Bread; How to Judge Good Bakery Bread; What Regulates the Price of Bread to the Institutions; Sanitary Laws as Applied to Commercial Bakeries.

This was an enjoyable meeting and the association feels that this kind of meeting stimulates better feeling beween salesmen and dietitians.

Dr. Eitel Dies

Dr. George G. Eitel, founder and head of Eitel Hospital, Minneapolis, Minn., died February 15. Dr. Eitel was sixty-nine years of age and has been one of the best known physicians of the Northwest for the past thirty-five years. In Minneapolis he built, sixteen years ago, the hospital which it had been his ambition for many years to establish. To the University of Minnesota he promised, less than two years ago, a gift at his death to create a fund for medical students and for research.

Methodist Hospital Fund Gains $27,000,000

During the last four years Methodist hospital properties and endowments have made an increase of $27,000,000, and hospital receipts have increased $5,000,000, according to the annual report of Dr. N. E. Davis, corresponding secretary, Board of Hospitals, Homes and Deaconess Work of the Methodist Episcopal Church, Chicago. The total property valuation and endowment of all Methodist hospitals and homes in the United States represents $75,000,000, an increase of $36,000,000 since 1920.

Mentally Ill Patients Increase in New York State

Notwithstanding the new buildings for the care of the insane, the state hospitals of New York are more crowded than at any time in recent years, according to a report by Dr. Frederick W. Parsons, Albany, N. Y., head of the department of mental hygiene. A $50,000,000 bond issue was authorized in 1923 to enlarge the state hospitals. It appears now that when this fund is expended there still will be overcrowding even if there is no increase in patients from now until the buildings are completed. Dec. 1, 1927, there were said to be 10,509 more patients than the facilities warranted; the eighteen civil hospitals were crowded to 31.9 per cent above their normal capacity. Governor Smith has suggested already that another bond issue may be necessary. The report shows the increase in the number of patients on July 1 of each year for several years. In the first five months of the present fiscal year, there was an increase of 961, indicating that the gain for the year at the same rate would be 2,300 patients. The increase in the previous fiscal year was 1,891. —*Journal of the American Medical Association.*

MEMBER ARTISTIC LIGHTING EQUIPMENT ASSOCIATION

BEAUTIFUL
SANITARY
EASILY CLEANED
DURABLE
AMPLE LIGHT

LET THE USER MAKE THE SALE

Read the letter of Dr. C. W. Fitch.

It Tells the Story

Corridor—Dr. Fitch's Sanitarium—New York

"I felt them the most desirable fixtures for hospital purposes."

Dr. Fitch's Sanitarium, New York

FITCH SANITARIUM CORPORATION

Dec. 3rd, 1928.

Franklin Pottery,
Lansdale, Pa.

Gentlemen:-

I feel that it is but fair to you to express my satisfaction with Franklin Vitrified Pottery Lighting Fixtures, recently installed in Fitch's Sanatorium.

It may interest you to know that before placing my order I investigated the fixture problem pretty thoroughly and finally decided on Franklin Fixtures throughout because they met my demands in the following qualifications;

They have good lines, hence are beautiful. They are sanitary-- a very important consideration in hospital work. They provide ample light just where wanted. They are easily cleaned. They are durable and will look new as long as they remain. For these reasons I felt them the most desirable fixtures for hospital use.

Now that they are installed and I have had an opportunity to see them in actual use, I know that I made no mistake in my selection.

Thanking you for the courteous service given me by your representative, Mr. T. J. Trefton and your company, I am,

Respectfully yours,

Corner of Ward
Dr. Fitch's Sanitarium
New York

"I know that I made no mistake in my selection."

FRANKLIN Vitrified Pottery Lighting Fixtures

Are equally adaptable to almost any class of building, particularly to Hotels, Apartment Houses and Fine Residences.

Full data A. I. A. File No. 31-F-23

TILE

"Selected, Sealed and Certified"

Franklin Pottery manufactures, in colors to harmonize with its Vitrified Pottery Lighting Fixtures, a full line of:

White and Colored Wall Tile.
Glazed and Unglazed Floor Tile.
Faience Tile for Floor and Wall Use.
Bathroom Accessories.
Vitrified Pottery Switch Plates.
Franklin Flint Floors.
Frostproof Tile for exterior use.
Decorative Panels for individual use.
Stock Designs in Mantels, Fireplaces, Fountains, Panels, Inserts, etc.
Special designs submitted and executed.

Our white wall tile is "Selected, Sealed and Certified," in accordance with "Simplified Practice Recommendation No. 61" of the United States Department of Commerce.

"A Complete Service"

SEE OUR CATALOGUE IN SWEETS

Member Associated Tile Manufacturers

FRANKLIN POTTERY

A CORPORATION

LANSDALE, PENNA.

For complete index of advertisements refer to the Classified Directory

Among the Associations

Plans Develop for San Francisco Meeting

The 1928 annual meeting of the American Hospital Association will be held in San Francisco, Calif., August 6 to 10. The American Protestant Hospital Association will hold its meeting there from August 4 to 6, inclusive.

Meeting with the American Hospital Association and American Protestant Hospital Association will be the American Association of Hospital Social Workers, the American Occupational Therapy Association, the Children's Hospital Association of America and the Hospital Dietetic Council.

The San Francisco meeting gives promise of being one of the best attended and most important held by the association, in the value and number of exhibits.

The arrangements being made for the entertainment of the delegates and guests at the convention insure a pleasing and profitable week in San Francisco. The program is being planned with great care, and a particular feature will be the round table discussions running concurrently and covering every possible phase of hospital interests. A special effort will be made to encourage a closer personal acquaintance between members of the association and a more intimate friendship among the hospital people attending. Arrangements are being made to have all meetings of the association, including the round table meetings, start and close promptly at the scheduled hour.

The president's address will be delivered on Monday evening, August 6, and a reception and dance will complete the entertainment for that day.

The routine business for the association will be transacted as rapidly as possible, leaving the remainder of the time open for the general sessions and for the round table meetings.

The annual banquet will be held on Wednesday or Thursday evening, and a special effort will be made to secure someone of international prominence to deliver the address for the occasion.

Many Tours Are Planned

The travel arrangements have been intrusted by the association to the American Express Company. The transportation to the convention will be the usual summer tourist rates to the Coast, and will amount to one and one-tenth the usual rates, as compared to one and one-half rates for previous conventions. The American Express Company has arranged a series of interesting tours at moderate prices, including all the comforts of transcontinental travel. The following are some of the tours planned, with Chicago as the eastern starting point:

TOUR "A," $167: Covers use of special train to San Francisco, including round trip rail ticket, lower berth going, meals up to San Francisco, sightseeing at stop-over points and transfer charges.

TOUR "B," $195: Covers use of special train to San Francisco, via Los Angeles, including round trip rail ticket, lower berth going, meals en route, sightseeing at stop-over points, transfer charges, hotel at Los Angeles and steamship fare to Catalina Island.

TOUR "C," $289.40: Traveling with special train via Denver, Colorado Springs, Salt Lake City and Los Angeles to San Francisco, and returning via the Grand Canyon. This rate includes all expenses excepting meals in Los Angeles and San Francisco.

TOUR "D," $336: Traveling on special train via Denver, Colorado Springs, Salt Lake City and Los Angeles to San Francisco, and returning via Yellowstone Park. This rate includes all expenses excepting meals in Los Angeles and San Francisco. Tia Juana and San Diego included—additional cost, $16.

TOUR "E," $340: Traveling on special train via Denver, Colorado Springs, Salt Lake City and Los Angeles to San Francisco, and returning from San Francisco to Seattle, Portland, Vancouver and Canadian Rockies. This rate includes all expenses excepting meals in Los Angeles and San Francisco. Tia Juana and San Diego included—additional cost, $16.

Detailed and descriptive itineraries of these tours will be supplied on application to the American Railway Express Company, 70 East Randolph Street, Chicago, or to the office of the executive secretary of the American Hospital Association, 18 East Division Street, Chicago.

Inquiries from hospital people who expect to attend the San Francisco convention are being received in increasing numbers, and there is every indication that the San Francisco meeting will be one of the best attended of the annual conventions.

Hospital Problems Given Prominence at Medical Congress

Much of interest was presented at the Annual Congress on Medical Education, Medical Licensure and Hospitals held under the auspices of the Council on Medical Education and Hospitals of the American Medical Association, at the Palmer House, Chicago, February 6, 7 and 8. Hospital problems occupied many of the sessions held on the second day of the meeting and an instructive program was carried to a successful conclusion.

The morning session was devoted to the Council on Medical Education and Hospitals. Papers were read by Dr. Charles R. Bardeen, dean, University of Wisconsin Medical School, Madison, Wis., Dr. J. S. Evans, professor of medicine, University of Wisconsin Medical Schools, Madison, and by Dr. Irving S. Cutter, dean, Northwestern University Medical School, Chicago. A paper entitled "Investigative Work and Library Service in a Nonteaching Hospital" was presented by John E. Ransom, superintendent, Toledo Hospital, Toledo, Ohio. Mr. Ransom outlined the excellent systems that have been evolved at his hospital and his paper was the subject of much favorable comment by those attending the meeting.

The afternoon session was given over to a symposium on autopsies in medical schools and hospitals and the papers were presented by Dr. Harvey H. Bemis, professor of physical diagnosis, Detroit College of Medicine and Surgery, Detroit, Dr. Christopher G. Parnall, medical director, Rochester General Hospital, Rochester, N. Y., Dr. Elexius T. Bell, professor of pathology, University of Minnesota Medical School, Minneapolis, Minn., Dr. Frederick C. Smith, Marion, Ohio, and Dr. Howard T. Karsner,

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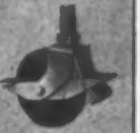

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Among the Associations

chairman, division of medical sciences, National Research Council, Washington, D. C.

An added feature on the morning's program was the presentation of an unofficial report of the work that is being done by the Committee on the Grading of Nursing Schools, presented by Dr. May Ayres Burgess, New York. Dr. Burgess showed several charts which represented a tabulation of the replies that have so far been received to questionnaires sent to nurses, physicians, hospital superintendents and others. She stated that there was a possibility that the future would see nurse specialists similar to nurse doctors, and that the nurses of tomorrow might possibly be classified according to their abilities, rather than grouped simply as nurses.

The first day's program was given over to the development of medical education in Great Britain and in the United States, together with a symposium on medical research in the governmental medical departments, and the Wednesday program consisted of a meeting of the Federation of State Medical Boards to discuss their problems.

Coming Meetings

American Association of Hospital Social Workers.
President, Mrs. Charles W. Webb, Lakeside Hospital, Cleveland, Ohio.
Executive-Secretary, Helen Beckley, 18 East Division Street, Chicago.
Next meeting, Memphis, Tenn., May 1-9.

American College of Surgeons.
President, Dr. George David Stewart, New York.
Director General, Dr. Franklin H. Martin, 40 East Erie Street, Chicago.
Next meeting, Boston, Oct. 8-12.

American Dietetic Association.
President, Florence Smith, St. Mary's Hospital, Rochester, Minn.
Business Manager, Dorothy B. Richmond, 25 East Washington Street, Chicago.
Next meeting, Washington, D. C., Oct. 29-31.

American Hospital Association.
President, Dr. Joseph C. Doane, Medical Director, Philadelphia General Hospital, Philadelphia.
Executive-Secretary, Dr. Bert W. Caldwell, 18 East Division Street, Chicago.
Next meeting, San Francisco, Aug. 6-10.

American Medical Association.
President, Dr. Jabez N. Jackson, Argyle Building, Kansas City, Mo.
Secretary, Dr. Olin West, 535 North Dearborn Street, Chicago.
Next meeting, Minneapolis, Minn., June 11-15.

American Protestant Hospital Association.
President, Rev. H. L. Fritschel, Milwaukee Hospital, Milwaukee, Wis.
Secretary-treasurer, Dr. Frank C. English, Christ Hospital, Cincinnati.
Next meeting, San Francisco, Cal., Aug. 4-6.

American Psychiatric Association.
President, Dr. Adolph Meyer, Johns Hopkins University, Baltimore, Md.
Secretary, Dr. Earl D. Bond, 4401 Market Street, Philadelphia.
Next meeting, Minneapolis, Minn., June 5-8.

American Public Health Association.
President, Dr. Herman N. Bundesen, Chicago.
Executive-Secretary, Homer N. Calver, 370 Seventh Avenue, New York.
Next meeting, Chicago, Oct. 15-19.

American Sanatorium Association.
President, Dr. Henry Boswell, Jr., Sanatorium, Miss.
Secretary, Dr. Walter H. Rathburn, Cassadaga, N. Y.
Next meeting, Portland, Ore., June 18.

Canadian Nurses' Association.
President, M. F. Gray, University of British Columbia, Vancouver.
Executive-Secretary, Jean S. Wilson, 511 Boyd Building, Winnipeg.
Next meeting, Winnipeg, July 3-4.

Catholic Hospital Association of the U. S. and Canada.
President, Rev. C. B. Moulinier, 124 Thirteenth Street, Milwaukee, Wis.
Secretary, Sister M. Bernadette, 124 Thirteenth Street, Milwaukee, Wis.
Next meeting, Cincinnati, June 18-22.

Colorado Hospital Association.
President, Dr. Maurice H. Rees, Denver.
Secretary, Frank J. Walter, Colorado General Hospital, Denver.
Next meeting, Denver, March 6-8.

Hospital Association of New York State.
President, Col. Louis C. Trimble, New York.
Secretary, Dr. Marvin Z. Westervelt, Staten Island Hospital, Staten Island.
Next meeting, New York, May 24-25.

Hospital Association of Pennsylvania.
President, Dr. H. K. Mohler, Jefferson Hospital, Philadelphia.
Secretary, H. E. Bishop, Robert Packer Hospital, Sayre.
Next meeting, Pittsburgh, Mar. 27-29.

Hospital Association of the State of Illinois.
President, Dr. Paul W. Wipperman, Decatur and Macon County Hospital, Decatur.
Secretary, E. I. Erickson, Augustana Hospital, Chicago.
Next meeting, Chicago, April 24-25.

Indiana Hospital Association.
President, Dr. M. F. Steele, Hope Methodist Hospital, Fort Wayne.
Secretary, Missouria F. Martin, Muncie Home Hospital, Muncie.
Next meeting, Indianapolis, April 10-11.

Michigan Hospital Association.
President, Dr. Harley A. Haynes, University Hospital, Ann Arbor.
Secretary, Dr. Donald D. Morrill, Blodgett Memorial Hospital, Grand Rapids.
Next meeting, Detroit, April 19-20.

Midwest Hospital Association.
President, Dr. B. A. Wilkes, Missouri Baptist Sanitarium, St. Louis.
Secretary, W. J. Grolton, Missouri Pacific Hospital, St. Louis.
Next meeting, Kansas City, Mo., April 27-28.

Minnesota Hospital Association.
President, Dr. Ernest S. Mariette, Glen Lake Sanatorium, Oak Terrace.
Secretary, Dr. Donald C. Smelzer, Charles T. Miller Hospital, St. Paul.
Next meeting, Minneapolis, May 28-29.

Missouri Hospital Association.
President, J. R. Smiley, St. Luke's Hospital, Kansas City.
Secretary, W. J. Grolton, Missouri Pacific Hospital, St. Louis.
Next meeting, Kansas City, April 20-21.

National League of Nursing Education.
President, Carrie M. Hall, Peter Bent Brigham Hospital, Boston.
Executive-Secretary, Blanche Pfefferkorn, 370 Seventh Avenue, New York.
Next meeting, Louisville, Ky., June 4-9.

National Organization for Public Health Nursing.
President, Mrs. Anne L. Hansen, 181 Franklin Street, Buffalo, N. Y.
Director, Jane C. Allen, 370 Seventh Avenue, New York.
Next meeting, Louisville, Ky., June 4-8.

National Tuberculosis Association.
President, Dr. H. Longstreet Taylor, Children's Preventorium, St. Paul, Minn.
Managing Director, Linsley R. Williams, 370 Seventh Avenue, New York.
Next meeting, Portland, Ore., June 18-20.

New England Hospital Association.
President, Dr. Thos. S. Brown, Mary Fletcher Hospital, Burlington, Vt.
Secretary, Dr. Leslie H. Wright, Peter Bent Brigham Hospital, Boston, Mass.
Next meeting, Burlington, Vt., May 24-25.

New Jersey Hospital Association.
President, Dr. Paul Keller, Beth Israel Hospital, Newark.
Executive-Secretary, W. Crane Lyon, 201 Lyons Avenue, Newark.
Next meeting, Atlantic City, June 5-6.

North Carolina Hospital Association.
President, Dr. C. S. Lawrence, Winston-Salem.
Secretary-Treasurer, Dr. L. V. Grady, Wilson.
Next meeting, New Bern, May 16-18.

Ohio Hospital Association.
President, Dr. E. R. Crew, Miami Valley Hospital, Dayton.
Secretary, Robert G. Paterson, Columbus.
Next meeting, Toledo, April 17-18.

Wisconsin Hospital Association.
President, Dr. W. A. Henke, Grand View Hospital, La Crosse.
Executive-Secretary, H. K. Thurston, Jackson Clinic, Madison.
Next meeting, Chicago, April 24-25.

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whose **Starch** *and* **Sugar** *Converting* **Functions** *are either in* **Partial** *or more or less* **Complete** *Abeyance*

KARO SYRUP is the ideal Dextrose and Dextrin containing agent for all classes, ages and conditions of people, but peculiarly so for those whose starch and sugar converting functions are either in partial or more or less complete abeyance.

KARO SYRUP is a distinctly valuable addition to the diet of either child or adult requiring heat and energy—because it is a quickly and completely available form of converted carbohydrate and is a nutritive element of decided potency and universal tolerability.

Both Blue Label and Red Label Karo are recommended by leading Pediatrists—we suggest the smaller or 1½ lb. can for more convenient use.

KARO is the Corn Syrup now being prescribed for infant feeding—not only because of its high Dextrose and Dextrin content—but because parents can secure Karo from all grocers.

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For complete index of advertisements refer to the Classified Directory

Among the Associations

T. B. Association Starts New Service

With the January issue of "Tuberculosis Abstracts" a new service has been started by the National Tuberculosis Association. This consists of a two-page sheet containing brief abstracts on tuberculosis taken from current medical literature, and is intended to interest general practitioners. It is illustrated.

The circulation is through state associations, and the plan of distribution varies according to the state. In some states the copies are mailed directly to a selected list of physicians; in others, arrangements have been made to include copies with the state medical journals. In other states the copies will be sent out with the state department of health bulletins, while a few state associations have arranged with the editors of the state medical journals to reprint the entire sheet each month. Dr. Allen K. Krause is the editorial adviser. Sample copies will be sent free upon request to the National Tuberculosis Association. The March issue is a special "early diagnosis" number than can be used as a reference in connection with the Early Diagnosis Campaign.

Comprehensive Program Planned for Catholic Hospital Convention

The value of the forthcoming thirteenth annual convention of the Catholic Hospital Association to be held at Cincinnati, will depend upon two principal elements, states M. A. Higgins, M.A., director of exhibits, Catholic Hospital Association, Milwaukee: first, the program itself, both in its planning and execution, and second, the serious interest and attention of the delegates.

The Cincinnati convention and clinical congress, an improvement upon and enlargement of the Milwaukee convention of 1927, has been planned to eliminate possible causes of disinterest and dissatisfaction in the old-time convention. The clinical feature tends to stimulate interest and attention on the part of both speakers and audience. The creation of the "hospital atmosphere" within the hospital convention, by means of physical set-ups representing various phases of actual operation, reproduces the serious, intense purpose and effort of the hospital itself. Furthermore, it permits a physical display of the latest scientific and engineering equipment for use in the service of the sick.

The clinics at Cincinnati will give special emphasis to problems now attracting much attention in the hospital world. Hospital administration, especially finance and accounting, is one of the most serious issues facing the average hospital of today. Again, general surgery, special surgery and anesthesia are departments constantly changing and constantly improving. The medical, hospital, and engineering professions are making substantial progress in operating room design, equipment, and technique. Problems of anesthesia and operating room nursing will be a center of attention at Cincinnati.

Admission, and room and ward service, and in general, "patient care," are improving steadily. There is an important and general movement toward the creation of the home atmosphere and comfort. The introduction of art and color into the hospital is becoming general and this will afford, at the Cincinnati convention, an opportunity to display a series of carefully designed and beautifully appointed hospital rooms, beginning with the office and executive suites and continuing all through the institution. The design, the furnishing and the decoration of these rooms give the architect and the artist ample scope for cooperation with the doctor and nurse in assisting the patient's recovery. The problems of hospital architecture and engineering are being given more and more consideration by the hospital executive of today. These problems will be discussed by authorities of national repute, with a record of personal achievement in the construction of great general and special hospitals.

The science of dietetics, of such importance to the patient, and now assuming equal rank in the hospital with nursing, will occupy the attention of a large number at this convention. An entire model general kitchen and quantitative kitchen will be set up, in which will be conducted a series of meetings bearing on the vital problem of food service to the sick. X-ray and physical therapy work are now claiming much of the hospital executive's attention. The medical profession and experts in electrical engineering are cooperating for the improvement and extension of these services. At Cincinnati two great clinics will portray actual service conditions in the latest and best practice.

Clinical and pathological laboratory service, now a requisite for all Class A hospitals, will be represented by model departments in which pathologists and technicians will demonstrate and discuss the problems of their departments. A special feature of the convention will be a general scientific meeting, when addresses will be given by national authorities on technical problems of the medical, hospital and nursing fields.

Hospital trustees, executives, chief nurses, dietitians and consultants, whether or not in the Catholic hospital field, are invited and urged to attend this convention and to contribute to it the value of their enthusiasm and serious interest. The officers of the Catholic Hospital Association are making every effort to warrant such an attendance and extend a cordial invitation to all such persons. The program is now in preparation and will be issued in preliminary form at a later date. All persons interested in this meeting may secure such a program upon application to the general chairman, Dr. John R. Hughes, dean, College of Hospital Administration, 131 Eleventh Street, Milwaukee, Wis.

Child Welfare Congress to Be Held in Paris

The International Child Welfare Congress which is to be convened in Paris July 8 to 12, 1928, has been organized by the League of Red Cross Societies, the International Association for the Protection of Childhood, the Save-the-Children Fund International Union, the International Union for Infant Welfare and the Comité Internationale de l'Enfance. The congress is associated with

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From the Peking Union Medical College at Peking, China, to the Boston City Hospital at Boston, Massachusetts.

What is the verdict rendered by the executives who have conducted this gigantic trial? Just this: A recent survey shows that in many typical *Columbia* installations, *replacement expense is running as low as 25 cents for each $100 of original investment.*

You'll understand the reason for this phenomenal durability when you handle a sample of our famous Damasko Hevi-Duty Shade Cloth (see our coupon offer below). This strong unfilled cambric cloth will not crack, show pinholes or stretch out of shape. And it may be obtained in a wide variety of beautiful colors.

So fill in the coupon. It will save you no small sum on your repair and replacement budget—plus the annoyance of poor performance.

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Mail the Coupon

Let us send you a specimen shade roller and samples of *Columbia* Damasko Hevi-Duty Shade Cloth. Also the "Standard Specification for Window Shades" which will save you much time and trouble. Just fill in the coupon and mail to *Columbia* Mills, Inc., 225 Fifth Ave., N. Y.

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Among the Associations

the International Housing and Town-Planning Congress, the International Congress of Public and Private Welfare and the International Conference of Social Work. Maternal, infant and child welfare will be studied by the congress, while social work and neglected or dependent children will receive especial attention. The organization of open air institutions for children, from the medical and pedagogical points of view, and the practical study of the working of children's courts will be discussed. The general report on the underlying principles of social work on behalf of children will be presented at the meeting by the children's bureau of the United States Department of Labor.

Tri-State Conference Sponsored by Chicago Dietetic Association

A tri-state conference of dietitians, sponsored by the Chicago Dietetic Association, was held at the Albert Merritt Billings Hospital, University of Chicago, Chicago, January 27 and 28. The dietitians of Wisconsin, Illinois and Indiana were invited to attend and representatives of Ohio, Iowa, Michigan and Florida were present. It is hoped that this is the beginning of yearly mid-western conferences.

The conference was opened by Mrs. Esther Ackerson Fischer, president of the Chicago Dietetic Association, who introduced as the first speaker Asa S. Bacon, superintendent, Presbyterian Hospital, Chicago. Mr. Bacon is well known for his original ideas on central food service, and he gave an interesting talk, contrasting the present system of food service in hospitals with the "boarding house" style of twenty or thirty years ago.

The next speaker was Chi Che Wang, Ph.D., of the Nelson Morris Institute for Medical Research, Michael Reese Hospital, Chicago, who spoke on the "Influence of Disease and Diet on Blood Chemistry," and gave a preliminary report of work on high and low protein diets. Slides were shown giving tables and charts, comparing the blood chemistry in normal and in various abnormal conditions. According to recent experiments made by Dr. Wang on high and low protein diets, the blood chemistry findings on a diet containing two grams of protein per kilogram of body weight would be considered pathological were the previous diet history unknown. On the low protein diet, containing 0.5 grams of protein per kilogram of body weight, the subjects lost weight and complained of weakness. Each of these diets was continued over a period of several weeks.

The afternoon session on January 27 closed with a paper on "Food Injuries in Infant Feeding," by Isaac A. Abt, M.D., professor of pediatrics, Northwestern University Medical School, Chicago. Dr. Abt summarized the various theories concerning infant feeding problems in vogue during the past years.

A dinner meeting was held on Friday evening at the Windermere East Hotel, followed by short addresses given by Katherine Blunt, Ph.D., chairman, department of home economics, University of Chicago, Laura Winkleman, assistant professor of home economics, Lewis Institute, Dorothy B. Richmond, business manager, American Dietetic Association, and Mrs. Gilbert, past president of the Chicago Dietetic Association.

The speaker of the evening was Milton Portis, M.D., who gave an illustrated lecture on "Dietetic Management in Peptic Ulcers." Peptic ulcers are the most common of gastro-intestinal troubles, but are often unrecognized or poorly treated. Dr. Portis urged dietetic and medical treatment adapted to each individual case, except in cases where surgery is the only remedy.

On Saturday morning the dietitians of Chicago institutions were at home to those attending the conference. At noon there was an informal luncheon at Ida Noyes Hall, University of Chicago.

At the Saturday afternoon meeting Solomon Strouse, M.D., attending physician Michael Reese Hospital, and associate clinical professor, Rush Medical School, Chicago, gave a talk on "Therapeutic Diets in Relation to 'Normal Diets." He stated that a normal diet is flexible, and is the diet on which a given person maintains health. Ancient tradition is largely followed in giving therapeutic diets, and scientifically little is known concerning them. The individual patient and practical results rather than theoretical rules should be considered in prescribing a diet.

An informal dinner followed by theatre parties closed the conference.

American Heart Association Issues New Pamphlets

Nine pamphlets on heart disease have been prepared by the American Heart Association as follows: (1) The American Heart Association; (2) Heart Disease and Its Prevention; (3) Talking Points on Heart Disease; (4) Advice to Those Who Have Rheumatic Heart Disease; (5) Advice to Those Who Have Syphilitic Heart Disease; (6) Advice to Those Who Have Arteriosclerosis or High Blood Pressure; (7) Advice to Those Who Contemplate Marriage and Pregnancy; (8) What Is Heart Disease?; (9) Directory of Cardiac Activities Throughout the United States and Canada.

Ohio T. B. Association Supports Early Diagnosis Campaign

The Ohio Tuberculosis Sanatorium Association, made up of tuberculosis hospital superintendents, nurses, and others engaged in tuberculosis work, met in Columbus, January 13, and pledged support to the campaign sponsored by the National Tuberculosis Association for an early diagnosis campaign during the month of March.

The Ohio campaign is under the direction of a committee composed of representatives of medical societies, sanatorium superintendents and tuberculosis specialists.

At the meeting in Columbus Mrs. Belle Goodnow, representing the National Tuberculosis Association, spoke before Ohio tuberculosis hospital superintendents on the follow-up of sanatorium patients. Dr. C. L. Hyde, Akron, Ohio, spoke on "Latent Tuberculosis in Children."

Spinach with Scrambled Eggs and Chili Sauce

Arrange scrambled eggs on toast. Heat Libby's Spinach and place in center of eggs. Serve with one tablespoon of Libby's Chili Sauce

Popular in the Children's Ward

Make a cream soup and add Libby's Spinach, chopped fine. Decorate soup with stars and other fancy shapes cut from thin slices of carrot

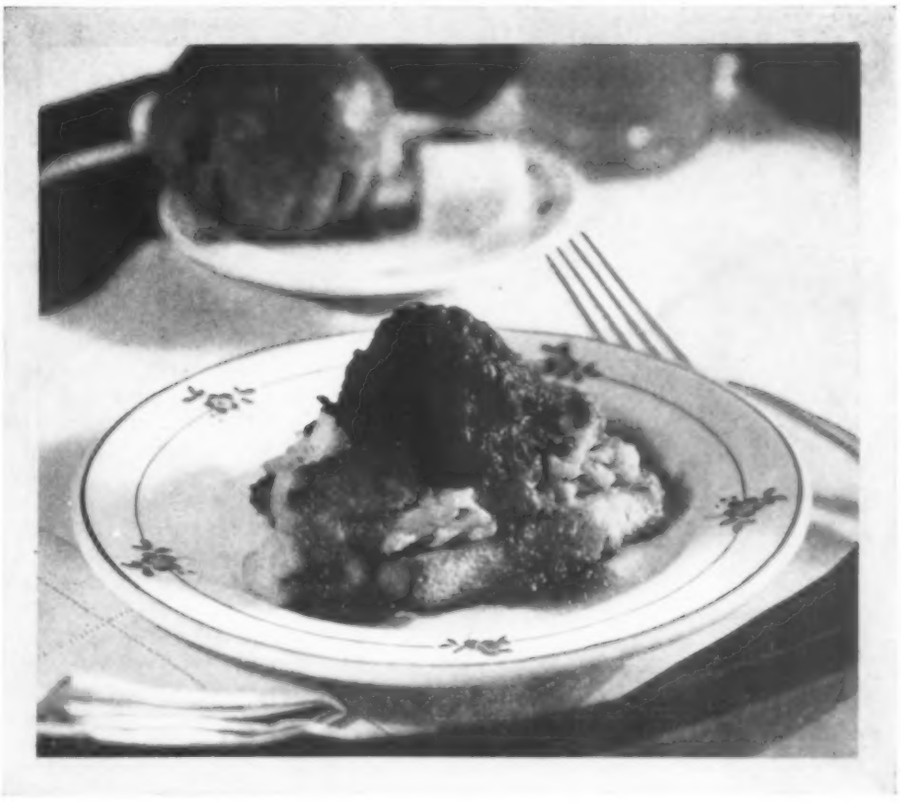
For the anæmia case

Heat Libby's Spinach and serve on buttered toast with slices of buttered beets and carrots

Two simple variations

Sprinkle buttered bread crumbs and grated cheese on Libby's Spinach which has been heated and place in oven until crumbs and cheese are brown

Heat Libby's Spinach and serve with slice of lemon



Tempting variety in serving spinach

—just what *lagging* appetites need

Easily made dishes that persuade patients to eat

So much importance attaches now to spinach! On the trays of many large hospitals, spinach appears regularly—for bulk, for vitamins, for iron, for salts!

And to persuade patients to eat this needed vegetable, these hospitals serve it in varied ways that are new and tempting, such as Spinach with Scrambled Eggs and Chili Sauce. Some of these ways are described here—they will please even your fussy patients!

These and other spinach dishes are at their best, leading dietitians say, only when made with a spinach that is appetizing both in texture and in flavor. In many hospitals, one kind of spinach is always used, firm, crisp leaves, with a delicacy of flavor that tempts the patient to eat a full portion—Libby's Spinach. Grown in California by Libby, the crinkly leaves are picked when young, tumbled for hours in cold water, then packed garden fresh the very same day they are picked!

Hospitals which know the goodness of Libby's Spinach also use others of Libby's 100 Foods—the pick of each crop, packed in Libby's sunny kitchens right on the edge of the fields and orchards. They will help you make your trays more attractive—ask your jobber about Libby's 100 Foods.

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Libby's 100 Foods

These Libby Foods of finest flavor now are packed in special sizes for institutions:

Hawaiian Pineapple
California Asparagus
California Fruits
Spinach, Kraut
Jams, Jellies
Santa Clara Prunes in Syrup
Blackberries
Loganberries
Red Raspberries
Tomato Purée
Pork and Beans
Olives
Pickles, Mustard
Bouillon Cubes
Beef Extract
Catchup, Chili Sauce
Salmon
Evaporated Milk
Mince Meat
Boneless Chicken

For complete index of advertisements refer to the Classified Directory

Among the Associations

Catholic Nurses to Meet at Cincinnati

Year by year the conventions of the International Catholic Guild of Nurses become more interesting, draw larger groups and win greater praise from those who attend them. It is hoped, therefore, that the coming fourth annual convention, which marks the conclusion of the third year of the guild's existence, will be even more successful than preceding ones. The program will be given on the evenings of the week dedicated to the Hospital Clinical Congress, which takes place at Cincinnati, June 18 to 22. The program will include papers by distinguished members of the nursing profession and by others who have made special studies of the profession and progress of nursing.

Recent surveys have shown the disadvantages of private duty nursing from the standpoint of steady occupation, of a living wage and of continuous good health. The problems of the private duty nurse and the solutions of these problems will form one of the topics of discussion at the convention. Nursing education, while it is having a rapid growth, is still bringing up many new problems and difficulties that directly affect the student nurse and the directresses and instructresses of nursing schools. These problems of nursing education will also be discussed.

While it is essential that the private duty nurse should get a living wage and that the economic side of the nurse's life should be safeguarded, still it is necessary, too, to safeguard the interests of the middle class patients, who sometimes find it difficult to bear the expense of nursing care during a long illness. Group nursing and visiting nursing bid fair to solve this problem to a certain degree and no little experience has been gained during the past few years in these methods of nursing. At the convention an effort will be made to bring out what is best and most helpful in this experience.

Nurse's Personality a Factor in Her Success

It is becoming more and more evident that the recreation of the nurse, her personal culture and her personality, have a great deal to do with her success in her chosen calling. Nurses who have recently graduated sometimes find it difficult to orient themselves in regard to these vital needs. Some of them neglect their personal interests and needs; others rush to the other extreme and indulge in excessive activity and amusement. Those who are best capable of counseling nurses in these respects will have a place on the program of this year's convention.

This year a number of chapters have been organized in the guild and it is hoped that every one of them will have a good representation at this year's convention. Chapter presidents and other officers should acquaint all the members with the advantages of attending the convention, and should encourage them to make their reservations as soon as possible. All who are interested will be cordially welcome, whether members or not. The program has been arranged so that the nurses will be free all day to attend the general clinics and meetings of the Hospital Clinical Congress and to visit the exhibits. The evenings will be devoted to meetings of the guild, when programs especially interesting to the nurses will be presented. The general public will be invited to attend some of these meetings so that they may be brought into closer contact with the nursing profession and made more sympathetic and appreciative of its needs and its achievements.

Nurses who attend the convention will have an opportunity of meeting many hospital Sisters as well as lay nurses from all parts of the United States and Canada. They can combine attendance at the convention with their annual vacation if they wish to do so. Cincinnati is a city centrally situated, from which the North, the South, the East and the West are readily accessible. The nurse who comes to the convention can arrange to stay for some days before or after in this interesting city and can then readily travel to some other vacation spot before returning home. Nurses who wish to make reservations for rooms, or to obtain special information concerning the program and activities of the meeting are invited to write to the headquarters of the guild at 124 Thirteenth Street, Milwaukee, Wis.

Ontario Hospital Association Presents Case to Government

A deputation of the Ontario Hospital Association was received by the Hon. Lincoln Goldie at the Parliament Buildings, Toronto, on Wednesday, January 11. Delegates, representing over sixty hospitals of the province, and numbering 150 persons, attended to present their case to the Government. Their requests were as follows:

1. That each public hospital shall have the right to collect from all municipalities, other than the municipality in which the hospital is situated, the sum of two dollars per day toward the maintenance of indigent patients from such municipalities; and that this increased municipal per diem shall not bar the hospital from receiving the government per diem.

2. That hospitals be permitted to collect from public ward paying patients two dollars per day, and also to receive the government per diem.

3. That the period of 120 days for which the government per diem is now paid, be extended in the case of such patients as require a more prolonged stay in the hospital, and that for the extended period the full government per diem be paid.

4. That one-half the municipal and government per diems be paid for the hospital care of the babies of indigent mothers who are patients in the hospitals.

5. That patients, for whose care and treatment no municipality can be held responsible, be regarded as indigent patients as the wards of the province, and be paid for out of the provincial treasury, as is the practice in unorganized districts.

6. That the government per diem be increased to seventy-five cents, for hospital care and treatment of indigent patients.

The Hon. Lincoln Goldie gave a sympathetic hearing to the deputation and promised that whatever money was available would be spent along the lines indicated by the association.

The Continued Success
OF
Schoeding[illegible] Visible Clinical Record Ch[illegible] Filing System

Shows the great service it is rendering in the [illegible]ital Field.

This service has been rendered because of the fact that the patient's ar[illegible]tending physician's names and the patient's room numb[illegible]are all visible on every chart holder.

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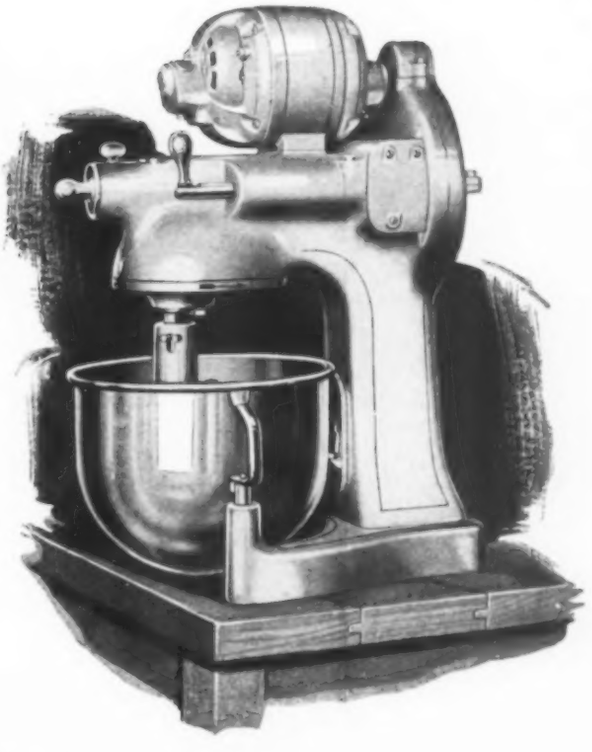

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NURSING AND THE HOSPITAL

Conducted by M. HELENA MC MILLAN, R. N.,
Director, School of Nursing, Presbyterian Hospital, Chicago

When the Patient Is Hostess*

By EDNA L. FOLEY
Superintendent, Visiting Nurse Association of Chicago, Chicago

INSTRUCTORS have always conceded the value of first-hand contacts as well as knowledge of people in their own homes, whether their students be embryo social workers, school teachers, personnel managers, nurses, physicians or others who eventually are going to work with people.

Granting that the research student in his laboratory may do more for the eradication of yellow fever or leprosy than the individual worker in the field, we have to admit that the results of the field worker prove the value of the discoveries of the research worker.

In the same way, those of us who have worked with student nurses and who have done institutional work and private duty nursing realize that field work or work in patients' homes, under supervision, is a helpful part of their three years' training, because it does give them contact with conditions of which, perhaps, they have heard vaguely, of which they may have read, of which they may have been told in lectures.

For a long time, student nurses used to be assigned to various public health nursing associations and their work was rather haphazardly managed. They were assigned to go with other nurses; they were used to give help in heavy districts. If they were uncommonly intelligent, they got quite a bit from the experience. If they were dependent upon instruction and direction, they were distressed or disgusted by what they saw and got little that they could carry back into their daily life as student or graduate nurse.

Student Nurses' Work Is Definitely Outlined

Now, in most organizations all that has been changed. A definite outline of demonstrations, lectures, conferences, excursion visits and home work has been planned for all student nurses. The objectives of this experience are to teach student nurses to apply what they have learned in hospitals, in all sorts and conditions of homes; to teach them the importance of working closely with physicians, not merely with doctors on the staffs of their own hospitals; and to teach them to cooperate with other agencies and workers in both the public health and social service fields. Few young nurses realize the value of good nursing care until they have seen it help to effect miracles of reconstruction in homes where the nursing service is preliminary to some up-to-date and thorough health teaching.

People busy in hospital practice seldom realize that the student nurse leads an unusually sheltered life. In many places her hospital work or thoughts about it or its associations take up all of her waking hours. When she is not doing it, she is thinking of it or is in its atmosphere. She may get down town to shop occasionally; she may be taken to visit some well known institution, but an extraordinary number of young women spend three years in a training school in our large cities without learning anything about those cities, except as they touch the lives of a small circle of workers in those particular hospitals.

Nurse's Readjustment Is Difficult

The readjustment of the average young girl to hospital life is a difficult one, for most of them go from the absolute freedom of the present day home to the fairly strict discipline and exacting work of the hospital. The patient becomes a part of that discipline. Whether in ward or private room, he turns or is turned according to bells and rules and traditions. It is a good thing for a student nurse who is still in a comparatively plastic state to get out into the world, where she will discover that the patient in his own home is master of the situation. Unless he is desperately ill, he still has the privilege of changing his mind, not once but frequently. Only the nurse keenly interested in people and with somewhat rare qualities of adaptability, can "manage" such patients from the beginning.

Even under close supervision and with all the helpful instruction and advice that we are able to give, the trial and error method of approach to the home and personal contact, still has to be used by most student nurses.

Only recently a young student nurse reported to her supervisor that she had gone into a home on Monday, intending to carry out to the letter everything that she had seen an older visiting nurse do the preceding Saturday. On her way up the block, she rehearsed the conversation. She recalled how the nurse had knocked on the door and waited a minute before opening it and going down the hall. Then she had knocked on the inner door and greeted the family pleasantly when a welcome "Come in" answered her second knock. She thought herself letter-perfect in the conversation—questions and answers and rather skillfully given advice—that the older nurse

*Read before the Institute for Nurses, under the auspices of the Illinois League of Nursing Education, August, 1927.

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had carried on with a patient obviously unwilling to listen to anything.

But her call was a complete failure and the little student was much relieved when the supervisor assured her that a woman so intoxicated that she did not realize that the nurse was standing in the doorway, was hardly a subject for the most diplomatically planned instruction and advice. The experience did not harm the student nurse. It was a good thing for her to know early in her career that the best laid plans often go astray.

That patient in the hospital could not have obtained liquor. She would have submitted without a murmur to a thorough examination; her diet would have been restricted regardless of her objections; a twenty-four hour specimen would have been secured almost without her knowing it. The student nurse is still going to work with that patient and ultimately she will be successful, but the marked difference between the first and the second visits was an excellent object lesson for her. She knows that that patient, as the mother of little children and the expectant mother of another, must have care, whether she wants it or not. She knows that the visiting nurses exist to give that care until they can safely dismiss the patient to some other agency, and it is good for her to have to rack her brains in devising ways and means to give the help that is needed before it is too late.

What Field Work Teaches the Nurse

Another thing that field work does for student nurses is to teach them that there seem to be almost as many doctors in the world as there are patients, and that while the doctor is legally licensed to practice medicine, she is licensed to practice nursing, which naturally involves one hundred per cent cooperation with the physician.

In a sub-station conference last month, a student nurse was insisting that when patients needed care and the doctors were apparently indifferent, the nurse could take the question of care into her own hands. In spite of the supervisor's attempt to guide it, the conversation seemed to be going in the direction of the student's opinion when an older nurse, a former member of the staff, for the last two years community nurse in a small town, came in, visiting her old haunts.

The question was put up to her and she gave her experience. She had gone into a fairly well-to-do community of about five thousand people. Her predecessor had been in the field for several years and was much loved by the townsfolk. Search proved, however, that there was hardly a physician in town speaking to her. To the amazement of her committee, the new nurse spent her first two or three days calling on each physician, explaining her work and asking his cooperation and help. She told them about the standing orders of the Chicago association and asked if the doctors would get together and plan some orders for her, which she could use to make their patients comfortable until she could get in touch with them.

So many of the doctors told her frankly that they had never dreamed that a public health nurse could show so much deference to the feelings, opinions and legal rights of a physician in any community, that the nurse began to wonder whether, after all, the ethics that had been taught her in the training school and later in the Visiting Nurse Association were peculiar only to those two organizations, although presumably known to most nurses.

The supervisor said afterwards the visit of this nurse was so providential that it seemed planned. Her vivid description of situations facing new public health nurses was a revelation to the students.

Public health nurses must do much for their patients that would often be done by interns or younger doctors in hospitals. A great deal depends upon the physicians who are in charge of the patients in their homes. The same visiting nurse may meet a physician who does not want a temperature taken unless by written order and she may, in the same day, be asked to do a dressing that would be considered only a dressing for the attendant's first assistant if the patient were in the hospital. She may not suggest boiled water for a newborn infant in a few instances; in other homes, the doctor may expect her to be much more of an expert on the intricacies of infant feeding than he is.

In her excursion visits to other agencies—prenatal clinics, infant welfare conferences, social service exchanges and tuberculosis sanatoriums—the student nurse learns how vast the field is and how much easier it is to get results when there is no friction but good understanding between public health nurses and other workers in the field. The student nurse working with community nurses or rural nurses discovers how few agencies and other workers there are in large fields and how much she must learn to take upon herself if she is really going to help her people.

She discovers that the virtues of the poor have not been overrated—their stoicism, their kindness, their courtesy. She unfortunately learns, also, that their vices are not entirely due to lack of education and opportunity but that folks are folks, no matter what they seem to be externally.

Probably most associations giving field service to student nurses, plan two students to one graduate visiting nurse. They ask that the students shall come to them in their senior year and only after they have had their obstetrical training, their surgical work, some experience with children and, if possible, their communicable disease training. Those of us who know the insidiousness of onset as well as the ravages of whooping cough and measles in the homes of our families, hope that the day is not far distant when every student nurse will have an opportunity to work over patients suffering from infectious diseases, and will not be given a diploma when she has had only a few lectures in the classroom about the symptoms and care of these diseases.

When Shall Public Health Training Start?

Public health nursing organizations are frequently asked if they will not take students earlier in their training. The more mature student, to whom life is a fairly serious undertaking, is, perhaps, able to get a valuable experience if she is taken into district homes during her first six months. Then she sees the patient as a member of a family; she is able to think of him in connection with his background and not merely as Bed No. 6, to be done up with expedition and before ten o'clock.

To most younger students, however, readjustment to hospital life is so tremendous and ward work and classroom work take so much of their strength and energy that they see dirt where an older person would recognize signs of distress and poor housekeeping; they see vice where experience would teach them to recognize misfortune and ignorance; and they are apt to leave a tenement or a small district home, disgusted with the improvidence of its inmates or appalled by the apparent indifference of the people in power, when, actually, conditions might be much worse.

Perhaps the student nurse has been taught that Pasteur once said that it was in the power of man to wipe out all disease. If she is taken into district homes and sees,

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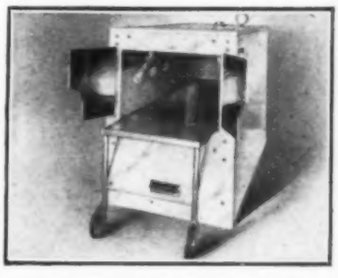

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too early, preventable distress and suffering, she is apt to remember what Pasteur said but she has no background of knowledge or philosophy of life on which to build the comforting assurance that it is her privilege, for a few months, at least, to help make Pasteur's prediction come true.

Wherever we have students—nurses or others—we have definite objectives. The successful student is one who comes from a school where service is put before education; the comfort of others before her own. "Education," as Kim's old Lama tells us, "is greatest blessing if of best sorts. Otherwise no earthly use." Education has made great strides since the old Lama first put his feet upon "the Way," but its fundamental objective has not changed. An education that enables a worker to give better service to others means, ultimately, more happiness in the life of the individual rendering that service, and probably all of us recognize that that is an education "of best sorts." Education that makes the average person feel superior when she should be humble, that makes her unwilling to render any tiny service that means greater comfort and peace of mind to people in physical pain or mental distress, is "no earthly use."

Most nurses nowadays must plan to earn their bread and butter, for if they do not, no one will get it for them. Nevertheless "service" to one who has struggled to get her technical education means not only ultimate bread and butter, it implies that the nurse herself derives a sense of satisfaction from work well done.

Success lies, sometimes, in giving a little more than one gets. In the field of public health nursing, the student nurse, after her first few days of bewilderment (for the orientation is not easy), is fortunate if she learns that she is being given an unusual opportunity to let the results of her hospital work demonstrate the value of her training, as well as her fitness to become the guide, philosopher and friend in all sorts and conditions of homes and families.

Group Nursing Wins Converts

Although considerable difference of opinion continues to prevail in regard to the form group nursing should take—the number of nurses to be employed, the hours to be apportioned to each and the ratio of nurses to patients—yet voices from all quarters agree that group nursing in the hospital is here to stay.

Carried on with four participants—the patient, the doctor, the nurse and the hospital—group nursing is simply giving the patient in the hospital nursing care as he needs it, and not charging him for any more than he receives. The doctor may prescribe one-third or one-fourth or one-fifth of a day of nursing service for the patient as he sees fit, and one nurse is assigned to three or four or five patients as the case may be. That the plan is not at all new is realized by almost all nurses who have acted as directresses of schools of nursing, and by all nurses who remember their student days, for it is exactly what is done in effect when one student nurse is given several patients on a private corridor to care for.

Not only does group nursing enable the public to get nursing service at a lower cost, but it does away with the great waste in nursing service that is common in hospitals today, where highly trained special nurses are assigned to care for patients who may need comparatively few hours of nursing daily. Many nurses are irked at the time they must spend in corridors waiting for patients' calls that do not come, when they might be giving their skill and attention to others who are ill, and the patient pays for care he does not need.

The waste is too great for both patient and nurse, and group nursing is one of the possible solutions. Some experiments in group nursing have been unsuccessful, of course, but in considering this, people must not lose sight of the fact that as group nursing is essentially a profit-sharing enterprise, calling for the mutual respect of the participants—namely the patient, the doctor, the nurse and the hospital—success is conditioned on team work and on a sense of sportsmanship.

There is also, in the minds of almost all concerned with the problem, a natural resistance to the idea of change, but acceptance of the plan is growing more general. For instance, the superintendent of a 600-bed hospital two years ago said group nursing would be utterly impractical in her institution. A few months ago, however, she announced that one floor of her private pavilion was to be given over to an experiment in group nursing.

Some of the places in which noteworthy experiments in group nursing are taking place are the Sparrow Hospital, Lansing, Mich., St. Mary's Hospital, Rochester, Minn., St. Mary's Mercy Hospital, Gary, Ind., University Hospital, Ann Arbor, Mich., St. Lukes Hospital, Duluth, Minn., and several hospitals in Detroit.

Results in these institutions will influence the trend this type of nursing will take.

The Intern Wants Real Practice

In a paper delivered at the annual congress on medical education, medical licensure and hospitals of the American Medical Association, recently published in the *Journal of the American Medical Association*, Dr. George Edward Follansbee, Cleveland, makes the following observation concerning personal clinical instruction to the intern:

"The intern is willing to do tiresome detail work on his cases, such as history taking, examinations and laboratory work, but having done this preliminary work he then does not expect to be dropped out of the picture without the opportunity of practice with the patient in the measures that follow, while the attending physician or surgeon reaps the reward of his preliminary work. He is eager to learn, to try his ideas and to check the results, and in order to do this he desires and should have a close contact with the patient from the beginning to the end, whether that end is a discharge from the hospital as a cured patient, or the autopsy table, which reveals the accuracy of the work that has previously been done."

Courtesy

Courtesy is the oil that lubricates the mechanism of social and business intercourse. Without it the machinery will clog, rub, wear out and finally stop. It is the quality which most truly differentiates the civilized man from the savage. In its last analysis it is little more than consideration for others. It calls for a certain amount of self-control, and a small portion of sacrifice. Yet the sacrifice entailed usually is repaid manyfold by the response to a courteous act. It applies mainly to the little things of life. Courtesy is not a question of life or death, it is not a question of poverty or wealth. It usually takes only a little time, a little effort, a little kindly forethought; yet it may mean the saving of much inconvenience for someone else.—*Atlantic Medical Journal.*

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Ketogenic Diet in Epilepsy

By CLIFFORD J. BARBORKA, M.D.
Division of Medicine, Mayo Clinic
Rochester, Minn.

GUELPA and Marie in 1910 discussed a dietary measure in treating epilepsy, namely, fasting. Gradually since 1921 varied opinions have appeared in the literature, principally based on suggestions of Jarloev and Geyelin, concerning the possibility that there may be a relationship between the acid-base equilibrium of the body and the convulsive attacks, the attacks being more likely to occur when the reaction of the body is more alkaline.

The first method of treatment was to produce ketosis by starvation. This method was principally followed by pediatricians. In most instances the children were free from convulsive seizures during the period of fasting which produces ketosis, but the attacks returned sooner or later after the resumption of a normal diet. It was therefore clear that repeated fasting was not only impracticable but not a satisfactory means of maintaining ketosis.

Early Work With Ketogenic Diet

In 1921 Wilder, while working with high fat diets in the treatment of diabetes mellitus, first suggested their use in the treatment of epilepsy as a means of producing ketosis and still furnishing an adequate diet. This was the beginning of the ketogenic diet, so called because the ketogenic factors in the diet outbalanced the antiketogenic factors. The diet consisted of a large amount of fat with minimal amounts of protein and carbohydrate. The object of the diet is to produce ketosis as evidenced by acetone and diacetic acid in the urine. The state of ketosis is produced whenever there is incomplete combustion of fat. As long as there is one gram of carbohydrate available for four grams of fat in the diet, the fat is completely burned to carbon dioxid and water. If the ratio of 4:1 is increased to 5:1, the fats are incompletely burned and acetone and diacetic acid will appear. Large amounts of acetone and diacetic acid may be excreted in the urine (which thus provides a means of insuring the correct composition of the diet) for weeks or even years without any untoward symptoms.

Every patient treated with the diet is given an individual prescription. The basal metabolic requirement is determined directly or calculated from the DuBois normal standards. Thirty per cent is added to the basal food requirements for maintenance and growth. Due consideration is given to the constituents of the normal adequate diet, namely, protein sufficient to replace the nitrogenous waste and build new tissue, minerals that are essential for the proper balance of electrolytes, the vitamins, the omission of which for long periods leads to deficiency diseases, and water, which is so essential for all chemical changes in the organism.

Frequently the sudden change from the normal or high carbohydrate diet, on which the average patient lives today, to the low carbohydrate and high fat diet may result in nausea and even vomiting. If the diet is established gradually there is little difficulty, and the patients consume relatively large amounts of fat with zeal.

For this reason it has been found practicable to place the patients on a diet containing seventy-five grams of carbohydrate the first day and to reduce this to fifty grams the second day and to thirty grams the third day. On the fourth day the ultimate prescription is given. If nausea should occur, which is rare, one may prescribe small amounts of orange juice, which quickly overcomes the sensation.

Definite Improvement Effected

In 1921 the use of the ketogenic diet was begun in the Mayo Clinic, Rochester, Minn., in a few unselected cases in adults, with rather indifferent results. Helmholz and Peterman in 1921, utilized this method in children. Helmholz recently reported the results of five years' experience. He found that in 31 per cent of the children suffering from idiopathic epilepsy the ketogenic diet will abolish the attacks, and will bring about definite improvement in an additional 23 per cent. Definite benefit was thus brought about by the dietary regimen in 54 per cent. In the remaining 46 per cent of the children no benefit accrued from the treatment, although in many cases there was temporary improvement.

In 1924, selection of adult patients for treatment with the ketogenic diet was begun in the Mayo Clinic. The selection is made on the following criteria: (1) the case must be one of idiopathic epilepsy (idiopathic epilepsy signifies that type of epilepsy in which known causes of the recurrent convulsions have been eliminated); (2) the patient must have intelligence and willingness to coop-

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erate to the fullest extent; (3) the patient must be in a suitable environment and have facilities to obtain the diet; (4) attacks of either petit mal or grand mal must be frequent enough to justify some statistical conclusions, over a period of years, regarding the benefit that may or may not be derived, and, (5) the patient must be willing to spend two or three weeks under direct supervision so that he may learn individually the manner of maintaining and adjusting the ketogenic diet. Education of the patient is as important for success in treatment of epilepsy as in treatment of diabetes mellitus.

Diet Continued at Home

The adult patients, after the education period of two to three weeks, go home and continue this diet for a trial period of six months. They examine the urine at frequent intervals to ascertain that acetone bodies are being excreted, thus assuring themselves that they are in a state of ketosis. They keep a diary of the attacks of petit mal and grand mal that occur. At the end of six months it is thus possible to determine whether or not benefit has accrued. If not, the diet is discontinued, but if benefit has been derived, especially if the symptoms are abolished, the carbohydrate in the diet is gradually increased by five grams each month. Each third month the protein is increased by the same amount, the fat being reduced in proportion. In this way the diet gradually returns to normal and the patient may still be free from attacks, or the tolerance of the patient may be reached and the attacks precipitated again. In this event it is best to keep the prescription within the patient's tolerance and the patient more or less constantly in a state of ketosis.

Problems That Must Be Met

There are certain difficulties that I believe are worthy of note: (1) infringement of the rules of diet due to failure to make the patient realize the importance of small deviations or lack of cooperation; (2) failure of the patient to eat all of the prescribed diet; (3) the sensation of hunger due to lack of bulk; this can be obviated by the use of bran wafers, agar jelly and gelatin, as fillers; (4) the difficulty in incorporating large amounts of fat in the diet, since the chief supply must come from cream, butter, bacon, olive oil, plain or in mayonnaise, and cod-liver oil, and (5) the presence of constipation. Since constipation is commonly associated with epilepsy and seems to predispose to an attack, it seems desirable to insure good elimination. The ketogenic diet is in itself somewhat laxative so that cathartics should not be necessary. If they are, the selection should be limited to the following: plain granular agar, various mineral oils, sugar-free or plain petrolagar, salts (Carlsbad or Epsom), and the bitter fluid extract of cascara. Of these, the salts and sugar-free petrolagar are the most satisfactory. Either should be used only to aid in establishing regularity of defecation, and should be withdrawn as soon as possible.

One must depend on the clever dietitian to work out various means of adding fat. For example, in some instances the bacon fat is cooked in muffins; in other ways acids are used to "cut" the fat, thus facilitating the inclusion of additional fat. Vinegar can be used in this manner in salads.

The problem of meeting these difficulties is purely a matter of education and instruction, which is the most important part of the treatment. While the diet is being adjusted the patient is learning how to use a set of scales, how to use food tables and how to translate the diet prescription, which calls for grams of carbohydrate, protein and fat, into meals, in terms of vegetables, fruits, eggs and other foodstuffs. This at first seems difficult, but experience teaches that patients who have enjoyed only limited educational advantages can be trained sufficiently to take care of themselves. On the ketogenic diet, epileptics may gain or hold their weight and show improvement in their mental condition and general demeanor.

Although the evidence as yet is not sufficient, it at least points to the fact that children seem to respond better than adults. This fact may likely be due to the duration of the epileptiform seizures. On the other hand, children are more difficult to manage from the standpoint of maintaining a state of ketosis, as they will contrive to obtain candy, bread and other carbohydrates.

It is unfair to the patient at the time he approaches the treatment, to offer this regimen to him as a cure. No one can prophesy in any individual case whether or not benefit will result. While as yet many difficulties are encountered in the use of the ketogenic diet, patients who have tried all other forms of treatment without benefit, are usually willing to assume any burden and go to any amount of trouble and sacrifice to carry out the plan that offers a ray of hope for recovery or for diminution in the frequency and severity of the attacks.

Diet Has Proved Valuable

In summarizing, I may say that the ketogenic dietary regimen has proved of value in the treatment of epilepsy especially in the selected cases of idiopathic epilepsy both in children and adults. Concomitant with the establishment of a state of ketosis or shortly thereafter, there is, in a certain percentage of cases, a decrease or complete cessation of epileptic seizures.

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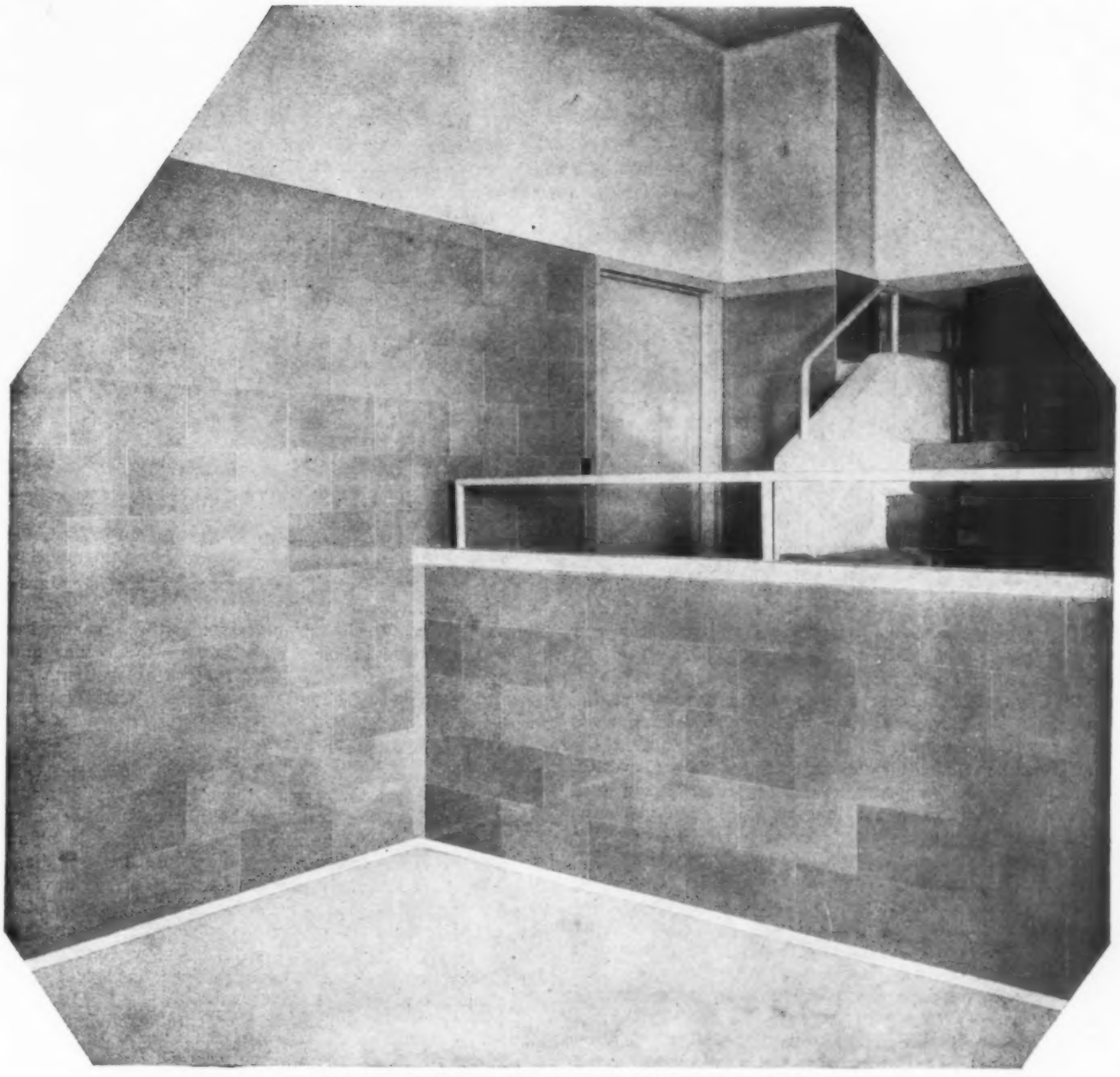
The Dietitian's Personality Is Important

"The personality of some people simply does not permit them to serve food to sick people with any degree of satisfaction." Thus writes Dr. Lester J. Palmer, in *Food Facts*, and continues:

"The home training and environment of the dietitian during the years before entering training will influence to a considerable degree her ability to please. To receive a complaint about the food in general or about a specific meal, and to pacify the patient with a smile, to understand the likes and dislikes of sick people who come from the various strata of society, to encourage the patient's cheerful acquiesence to the diet orders of the physician, to have the food on the dishes and the dishes on the trays arranged in such a tasteful and attractive manner as to appeal to sick individuals—all of these are much more a matter of instinct than they are of training. Therefore the girl who is to be a successful hospital dietitian must possess through heredity and early environment a natural ability for such a vocation."



A VITROLITE OPERATING ROOM — COOK COUNTY HOSPITAL, CHICAGO

The wainscoting in the operating rooms of the Children's Hospital, one of the Cook County Hospital Group, Chicago, is a shade of jade Vitrolite, developed in collaboration with the best hospital authorities as the most effective color for the purpose. ¶ Because of the exacting requirements of cleanliness and sanitation, Vitrolite was also selected, after thorough investigation, for the wainscoting in all operating rooms, kitchens, diet, sterilizing and anesthetic rooms, and the morgue, in all new buildings of this model hospital group. Architects should investigate the superiorities of Vitrolite for hospital uses.

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OUT-PATIENT SERVICE

Conducted by MICHAEL M. DAVIS, Ph.D., Executive Secretary, Committee on Dispensary Development, United Hospital Fund of New York, 151 Fifth Avenue; New York
A. K. HAYWOOD M.D., Superintendent, Montreal General Hospital, Montreal, Que

How the Cardiac Clinics in New York City Cooperate

By MARJORIE M. KINNEY
Secretary, Committee on Cardiac Clinics, New York Tuberculosis and Health Association, Inc., New York

HEART disease is now first in the list of causes of death.

Obviously no one person, no one organization can cope single-handed with a community problem such as heart disease, even when the problem is narrowed down to the care of ambulant patients who cannot afford the services of a private physician. It is not surprising, then, in a city as great and complex as New York, that the many cardiac clinics should come to see the value of a united front, such as a membership organization can give.

This organization in a voluntary association gives the opportunity to provide more adequate facilities for the diagnosis and treatment of patients.

Today there are forty-six member clinics of the committee on cardiac clinics of the heart committee of the New York Tuberculosis and Health Association, New York. Twenty-nine institutions from the four boroughs of Manhattan, Bronx, Brooklyn and Queens are represented, including department of public welfare and city institutions, together with private hospitals. Two of the clinics are detached clinics with hospital affiliation.

The organization of specialized clinics for the treatment of cardiac patients is not a new procedure in New York City; in fact it dates back to the clinic for ambulatory cardiacs established in 1911, by Dr. Hubert V. Guile, in Bellevue Hospital, and the number of such clinics has increased with the scientific interest in problems of heart disease.

The function of the cardiac clinic is primarily one of providing care for the ambulatory patient with organic heart disease, to help him to carry on as a useful member of society, in as good a condition as possible. Accuracy of diagnosis and continuity of treatment are essential.

Working Relation Established

To stimulate these objectives the committee on cardiac clinics has developed the following working relation with the clinics of which it is composed, namely, to:

Maintain a bureau of information on all matters pertaining to cardiac clinics.

Establish and improve clinic standards of administration, medical and social service care, classification, reports and nomenclature.

Promote the adoption and maintenance of these standards in all the clinics.

Act as a clearing house and coordinating agency between the various clinics, and between the clinics and other organizations for the welfare of heart patients.

Encourage the adoption of uniform records and reports in all the clinics.

How to Increase Staff Efficiency

Make every effort to increase the efficiency of the medical and social service staffs, by holding regular meetings for the discussion and exchange of ideas; by bringing to their attention improvements in administrative, diagnostic and therapeutic technique; by developing a visiting service to all the clinics by the secretary of the committee and others with technical experience, and encouraging an interchange of visits between clinic chiefs; by offering special courses to beginning workers both on the medical and social service staffs.

Develop further the districting of cardiac clinics.

Aid in the establishment of clinics as districting shows need for them, and pass on the qualifications for recognition of new clinics in the committee on cardiac clinics.

Make studies from time to time of methods of clinic administration and management.

The committee has the full-time service of a paid and trained executive.

The elegibility requirements for membership in this committee deal directly with matters pertaining to clinic standards, such as medical organization; social service; space, equipment and facilities; records; admission and distribution of patients; standards for physical examination; standards for treatment.

The pamphlet on "Requirements for an Ideal Cardiac Clinic,"* with its list of minimum requirements, is valuable not only as a criterion for determining the eligibility of the clinics for membership, but also for checking standards of work in clinics already members of the committee.

*Published by the committee on cardiac clinics of the New York Tuberculosis and Health Association, 244 Madison Avenue, New York, February, 1927.

THE HENRY FORD HOSPITAL, DETROIT, MICH.

IVORY SOAP *in the magnificent* Henry Ford Hospital

The selection of Ivory Soap by the management of the Henry Ford Hospital was based upon sound, careful judgment. A soap of unquestioned fineness and purity must be chosen—its quality to be equal to the traditionally high standards imposed by the modern hospital.

Besides this, it was considered desirable to select a soap known to be preferred by the majority of people—whether patients or members of the hospital personnel.

How well Ivory Soap was able to meet these exacting requirements is evidenced by the fact that it is used throughout this splendid institution.

* * *

Miniature Ivory

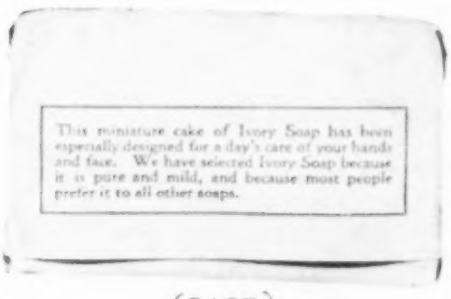
Ivory Soap in all of its many forms—from the large cake so familiar in millions of homes, to the miniature sizes found in leading hospitals, hotels and clubs—is the same 99 44/100% pure Ivory that has cleansed and protected sensitive skins for nearly half a century.

Five convenient miniature sizes of Ivory are provided for hospital use. The ¾ ounce cake chosen by the Henry Ford Hospital is reproduced below. A sample cake of each size will be mailed upon request.

PROCTER & GAMBLE
Cincinnati, O.

(FRONT)

Ivory Soap in the wrapper especially designed for the Henry Ford Hospital


This miniature cake of Ivory Soap has been especially designed for a day's care of your hands and face. We have selected Ivory Soap because it is pure and mild, and because most people prefer it to all other soaps.

(BACK)

An informal survey of the work done in the clinics of New York City, made during the past year and a half, showed that the physical equipment in the clinics was good on the whole, and that laboratory and x-ray facilities met the committee requirements.

No uniform data were at once available which would indicate the volume of work done for all clinics, or give facts relative to the admission and distribution of patients. Difficulties were encountered in securing from the medical records a complete diagnosis for all patients. Differences were found to exist as to the interpretation of the functional classification of patients.

To meet the need of a uniform method of recording certain statistical information for all the clinics, the heart committee and representatives of the cardiac clinic workers developed a monthly report form.

At the beginning of the committee's activity in 1926 only ten clinics were at once able to fill in the monthly reports from data already available. Today, thirty-nine of the forty-six clinics are regularly submitting a monthly report of clinic work. Such results could have been accomplished only through the exceptional cooperation of the cardiac social workers and of the clinic physicians.

Monthly Reports

At first the use of the monthly report worked a hardship for the social worker. In but few of the clinics is the social service staff adequate for the needs of the clinic, and clerical help is limited. In some cases a new method of bookkeeping was needed to handle the recording of material indicated for the monthly reports. For example, in order to establish a clinic case load, all the past records of the clinic were gone over to determine whether or not the case was at the time "active," this term being used to cover all patients who had been in the clinic within a period of six months.

For active cases a complete diagnosis was obtained. This entailed the problem of getting the patient back to the clinic for reëxamination. During the period of readjustment the work of the clinic session was unusually heavy as the doctors were making an effort to complete the diagnosis of every patient in accordance with the standard nomenclature for cardiac diagnosis.

The committee on cardiac clinics has been able to render certain assistance to clinics when needed, through the services of a statistical clerk. In some clinics this service has been advisory, while in others it has been necessary to work directly with the social worker in clearing the files and checking medical records for complete diagnosis.

Complete or partial reorganization of a number of clinics has been found necessary during the past year. At the request of the superintendent or chief of clinic, the secretary of the committee on cardiac clinics has worked closely with the clinic personnel on matters of reorganization. In three clinics a cardiac social worker has been added to the staff to meet the needs of the clinic.

The need for more adequate follow-up of clinic patients was demonstrated, in individual clinics, when the clinic case load was established. In checking the medical records for the last clinic visit of patients, it was found that many patients had lapsed treatment. The committee on cardiac clinics offered the clinics an appointment and follow-up card suitable for either the ordinary card file or the visible index which is now in use in many of the clinics.

To aid each clinic to view its own work in relation to the work of other clinics, a consolidated statement of clinic work, together with a multigraphed analysis of clinic figures has during 1927 been issued quarterly to chiefs of cardiac clinics, clinic physicians, directors of social service departments and cardiac social service workers.

These reports afford interesting comparisons of the work in different clinics and give an idea of the volume of work in the clinics as a whole. The total cases treated in the forty-six clinics during 1927 were 10,671. Rheumatic heart disease proved to be the most frequent diagnosis encountered, occurring in 42 per cent of the cases.

Although no formal plan for districting the cardiac clinics has been adopted, adjustments are constantly being made by the clinic workers themselves in localities where there is danger of overlapping. A list of clinics stating clinic days and hours is kept up to date and distributed to clinics for their convenience in referring or transferring patients for clinic care. The general practice of referring the patient to the clinic nearest his home seems the logical one. Long distances of travel are thus avoided for both the patient and the social worker.

The four cardiac homes for the care of children with heart disease are definitely linked up with the program of the heart committee through the development of a special subcommittee on institutional care.

Except in special cases provided for by the superintendents of the homes themselves, patients are accepted for admission only from the member clinics of the committee on cardiac clinics. This policy has been adopted by the homes to insure follow-up by the social workers in the cardiac clinics of patients having the benefit of convalescent care. The office of the New York Tuberculosis and Health Association provides a central service for the admission of patients to these homes. A special worker has been appointed to handle applications for admission.

Uniform records are in use in all of the homes that conform to the heart committee's standards of medical recording. These homes submit a monthly statement of the work. The cooperation between the convalescent homes and the cardiac clinics is excellent.

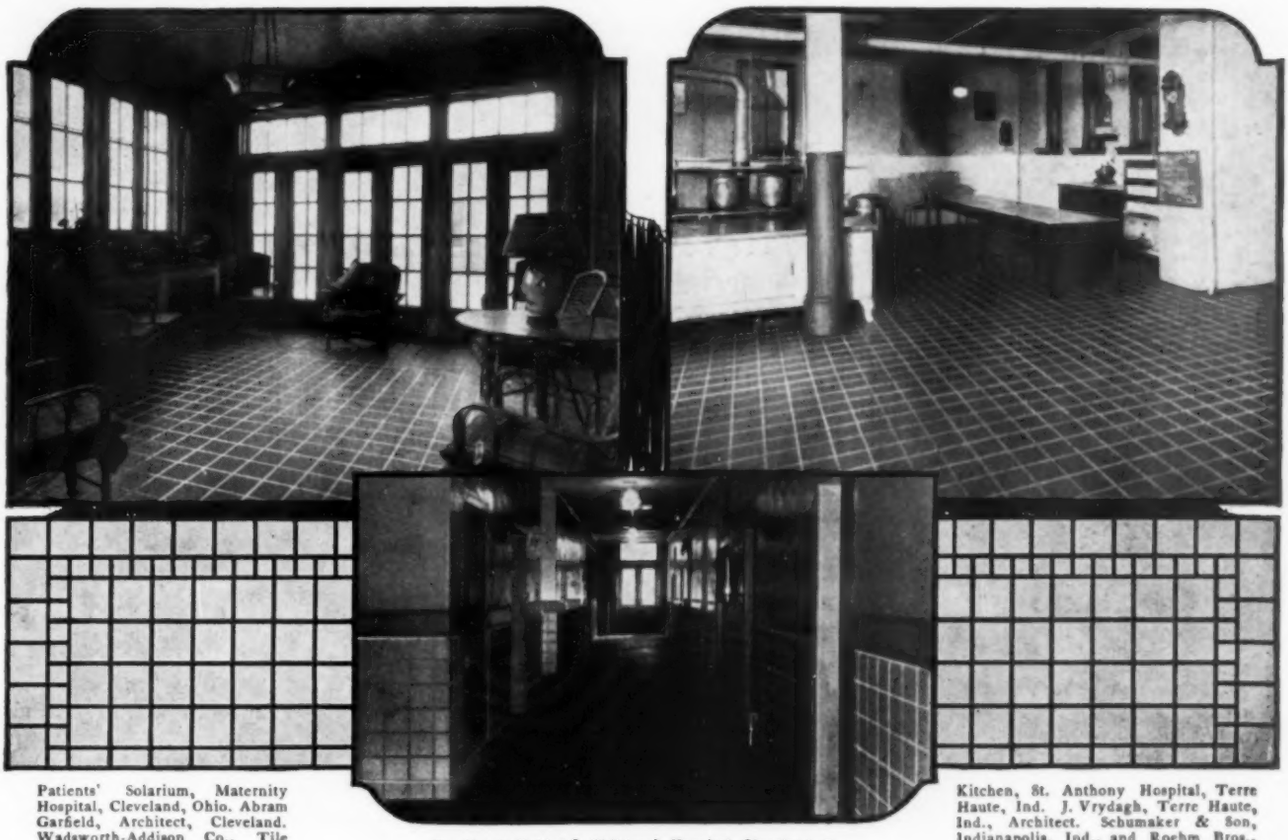
Of even greater importance, from the public health point of view, than the provision by the clinics of adequate facilities for the diagnosis and treatment of patients already afflicted with heart disease, is the need of more definite knowledge of the means of prevention.

From such by-products as uniformity of records, definiteness of classification, effectiveness of social case contact and better appreciation of high standards of service, data are being assembled which may cast important light on this problem.

Percentage of Autopsies Determines Hospital's Standard

"The basis of clinical medicine rests fundamentally on the principle of checking up postmortem observations against clinical observations," writes Dr. Frederick C. Smith, Marion, Ohio, in the *Journal of the American Medical Association.*

"Look where one may to see what the principal means are for advancing medical knowledge and one will always find that it is the autopsy. Wherever there is a medical center there will be an abundance of autopsies. Or, to put it better, wherever there is an abundance of autopsies there will be a medical center. In fact, the percentage of dead bodies in which an autopsy is done determines the standard of the medical center, hospital, school or other medical institution."



Patients' Solarium, Maternity Hospital, Cleveland, Ohio. Abram Garfield, Architect, Cleveland. Wadsworth-Addison Co., Tile Contractors, Cleveland.

Corridor in Babies & Children's Hospital, Cleveland, O. Abram Garfield, Architect, Cleveland Clarence H. Collings Co., Tile Contractors, Cleveland.

Kitchen, St. Anthony Hospital, Terre Haute, Ind. J. Vrydagh, Terre Haute, Ind., Architect. Schumaker & Son, Indianapolis, Ind., and Roehm Bros., Terre Haute, Ind., Contractors. Central Tile Co., Terre Haute, Indiana, Tile Contractors.

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But there are still further advantages!

The factors of extreme cleanliness and durability which have made Romany Quarry Tiles outstanding favorites for use in operating rooms, laboratories and kitchens, apply with equal force in the more public portions of the hospital. Years and years of service, strong cleaning compounds and disinfectants leave the surface of these tiles unscarred—as fresh in appearance as when new.

Low in first cost, unexcelled for durability and ease of cleaning, bright, beautiful Romany Quarry Tiles offer the greatest value among floor and wall surfacing materials.

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HOSPITAL EQUIPMENT AND OPERATION

With Special Reference to Laundry, Kitchen and Housekeeping Problems

Conducted by C. W. MUNGER, M.D., Director, Grasslands Hospital, Valhalla, N. Y.

Economy Is an Important Factor in Hospital Operation*

BY G. M. HANNER

Superintendent, Beth-El General Hospital, Colorado Springs, Colo.

EVERY organization has within itself a pair of twins. One of these is service. No railroad, bank, school or automobile can live long without giving service, and to my mind a hospital is no exception to this rule, as the first function of a hospital is to serve.

The other twin is economy. Every organization operating in and for society must operate in accordance with social laws. Railroads, banks and schools that fail to economize are at a disadvantage in competition with other similar organizations. Wise organizers locate where the greatest economy is possible with regard to fuel, transportation, organization and labor.

Service must be given with economy. All hospitals are more or less charitable institutions and the patrons will soon cease their giving unless funds are conserved. Cost mounts where extravagance rules and patients go where expenses are less. There is a great war on today between automobile firms of this country, and the car that can give service with the greatest economy will live while the others will die. So hospitals cannot escape this law—service with economy. Extravagant doctors, nurses and employees waste the substance and narrow the field of the hospital, thereby depriving the waiting sick of needed help.

All hospital administrators are interested in stimulating the institutional personnel to greater efforts in saving food, equipment, supplies and everything that goes into the operation of a hospital, but this must be done without interfering in any way with the character of service to the patients.

Do Not Carry Economy too Far

Economy may be carried to the danger point, however. To my mind it is not true economy to cut the wages of employees to the limit, because when we pay the minimum wage we receive the minimum of service and get only a low grade of help which causes a great economic loss through heavy turnover in employees. Of course economy that weakens service is false economy.

In our efforts to promote economy we must have, first of all, the cooperation of all department heads, nurses and employees. We must enlist everybody in the hospital in a drive for economy in operation rather than for funds to carry on operations.

Every hospital employee should keep in mind that when he or she turns off a radiator when heat is not needed, coal in the boiler room is being saved by the shovelful; that the turning off of an electric light will definitely affect the electric or power bill, and that the unnecessary use of the elevator uses up current that must be paid for. I believe if we were to give more attention to educating our employees as to what it means to take care of the patient and if we were to hold them responsible for what is intrusted to their care, we should have a higher standard of service and a more responsible group of people with whom to deal. Hospital employees as a general rule are apt to be wasteful, careless and extravagant, which raises the cost of service and leaves the hospital with a deficit at the end of a month or the end of the year.

There are good honest people who fall into the habit of taking linen and other supplies home when they work in a hospital. In former years there might have been a slight excuse for this, when hospital employees were underpaid and worked longer hours than any other class of people, but now we are paying hospital employees as much or probably a little more than they could get in other lines of work and petty theft should not be tolerated for one minute.

I think it would be a wise move, economically, for all hospitals to take some step in educating the public as to the reason for the increasing cost of maintaining hospitals, because an idea is prevalent in the mind of the public that hospitals are profiteering, are habitually overcharging the sick and are generally in the money-grabbing business.

The office force should remember that the writing of an unnecessary letter is a waste of time, material and postage. The unnecessary use of the telephone causes a strain upon the service, suggesting the possible need of additional facilities with additional cost.

In the dietary department every employee should scrutinize the food returned on plates to find out what is uneaten and wasted. We like to see patients' trays and

*Read at the meeting of the Colorado Hospital Association, Denver, Colo., December 7 and 8, 1927.

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for durability

HALE AND STURDY THEY EMERGE FROM the pull and tug of each day's wear. Pequot durability is your protection—your surest economy.

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No wonder that Pequot Sheets stand up so well—give such remarkably long service—in spite of the worst that laundries can do!

No wonder, too, that such care in manufacturing adds to the recognized Pequot durability a long list of other desirable qualities: Permanent whiteness, uniformity, easy washability, and that luxurious Pequot "feel".

The more emphasis your institution places on economy, the more reason for you to standardize on Pequot.

Naumkeag Steam Cotton Company, Salem, Mass. Parker, Wilder & Co., New York and Boston, Selling Agents.

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A New Lincoln Twin Disc Floor Machine

It is no longer necessary to lay soap and water by hand. The New Lincoln carries its own water in a convenient three gallon tank. A simple pull of a rod releases water directly in front of the brushes. This new feature effects a material saving in time and labor.

New Grey Duco Finish

The new Lincoln is finished in light grey Duco Lacquer, a very durable finish. Hospital superintendents like the appearance of the new Lincoln because it harmonizes so readily with hospital surroundings.

On Wax Polishing

The scrubbing brushes can be instantly changed to wax polishing brushes, and the Lincoln becomes in a moment a highly efficient polishing machine.

On Silence

The new Lincoln is quiet. The big, powerful motor has been silenced to a whisper. And the only evidence of the Lincoln's work is the soft swish of brushes on floor.

Five Days Free Trial

Let us send you the new Lincoln Twin Disc Floor Machine for a free trial. See for yourself the many new improvements that have made this a remarkable machine. No obligation whatever. Shall we send you one?

LINCOLN-SCHLUETER MACHINERY CO.

233 WEST GRAND AVE. CHICAGO, ILL.

employees' plates well cleared and I prefer to have them come back for a second helping rather than to offer them a first service so generous that much of the food is wasted. I always try to impress upon the minds of the employees in our dietary department that I do not begrudge what is used, only what is wasted. The dietitian can use this knowledge of what is left uneaten to aid her in catering better to the taste of the eater. Quantities should be proportioned to appetites. Thus the thoughtfulness of the employees in the lower stations offsets the requisitions handled by those in authority.

In the housekeeping department the maids should cooperate to produce the best results without exceeding the minimum standard in the consumption of supplies.

The laundry workers should use their supplies for efficiency instead of for suds, and should shut off the power from machines that are not in use. I think that one of the greatest problems in every hospital is the matter of issuing, checking and handling linen in and out of the laundry. When somebody presents a plan that will adequately solve that problem he will have made a tremendous contribution to the problem of economical administration of the hospital.

The technicians in the laboratory by watching their glassware and other materials will increase the life of a pipette indefinitely.

Everyone Can Help

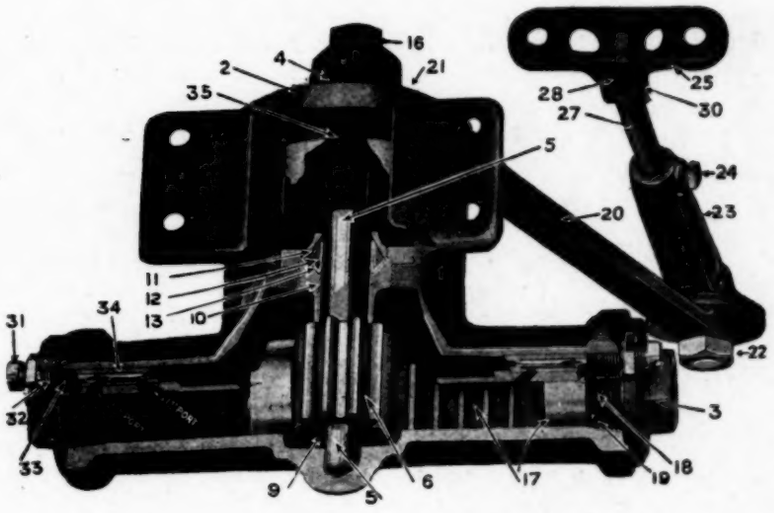
You can see from the above that everyone has a part to play in this economy drive. A careful study of individual departments is necessary for the best economy. Every department head must see the necessity of buying economically. I know it is not always easy to get these department heads to practice proper economy, but if we can develop departmental pride it will help. Administrators realize that the responsibility for the success of departments rests with the heads of the departments, who must be made to feel that it is their hospital, that their cooperation is vital to its success, and they should assist in stopping waste and should see that there is no lost motion in their departments, no employees with incomplete programs and no duplication of effort.

I was reading an article written by a prominent eastern hospital superintendent the other day and in it he gave some astounding figures. He put on an economy program in his hospital and in four months' time the total saving amounted to $9,563.55. He emphasized the fact that the success of the campaign was due to the wholehearted interest and support of the personnel. This is just an example of what one hospital has done along this line.

The cost of operating a hospital is so excessive that it is absolutely necessary that economy be practiced at all times and in every department. If the public could be made to understand that hospital service becomes constantly more expensive because of improved methods of treatment that necessitate costly equipment, additional personnel, new types of construction and other expenditures, there would be less criticisms of hospital charges and more generous cooperation in helping hospitals to improve.

Supplying a hospital with heat and light and power in the most economical manner, and seeing that these commodities are conservatively used are problems that should not be lost sight of.

Fuel is the most important commodity in all the world. The value of fuel enters into almost everything the human family needs, and yet as a nation there is nothing we have persisted in wasting to a greater extent. Every



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THE NORTON DOOR CLOSER is the product of an organization which for over forty years has specialized in the design and manufacture of door closers and controls. In these years of experience there has been a constant perfection of the "hundred-and-one" details that effect permanence and efficiency. Specify Norton when equipping the new hospital or remodeling the old. Assure yourself of these incomparable advantages: a two speed closer that operates the door from start to finish, eliminating any sudden rush or sudden stop; a door closer that prevents slamming backward as well as forward; a door closer that reduces strain on hinges, has life-long dependability, and functions perfectly to the satisfaction of the doctor, the nurse, the patient and the entire personnel. The Norton Closer has an unique principle that you will do well to investigate. It is now installed in hospitals throughout the country. It represents the utmost in efficiency and has won the enthusiastic praise of architects, superintendents, consultants and building committees.

Write for details and catalog of the Norton Door Closer. Let us specify on your needs and explain these "hundred - and - one" details that have made Norton the most durable and efficient door closer yet created.

NORTON DOOR CLOSER CO.

DIVISION OF THE YALE & TOWNE MFG. CO.

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A SILENT EFFICIENT DOOR HOLDER

Cast Bronze construction.

All finishes.

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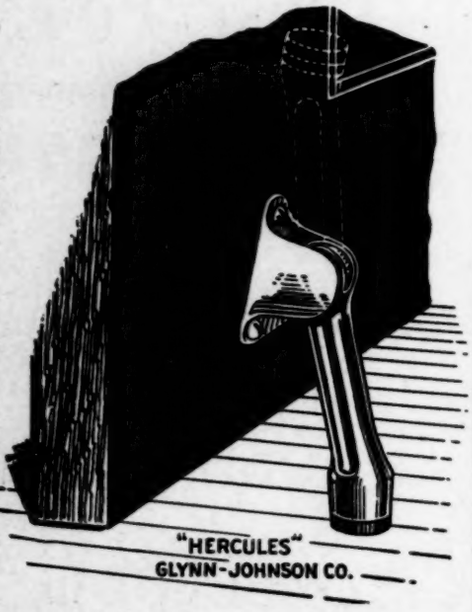
Will not mar floor or tear carpets. Easily operated with foot, fool proof with no mechanism to get out of order. Operates perfect in connection with door closers holding the door open at any desired degree in a positive manner.



WRITE FOR DESCRIPTIVE LITERATURE
SAMPLES SUBMITTED UPON REQUEST

Glynn-Johnson Corporation
La Porte, Ind.
District Offices and Representatives in All Principal Cities

pound of fuel wasted represents a draft upon the world's supply which cannot be replenished, and the sad part of the story is that this 48 per cent wasted through ignorance and carelessness does not belong to us, but is, with all other natural resources, the rightful property of the coming generations.

Interest in boiler plants is something that has been lacking for years in hospitals as in other lines of endeavor. As a rule we don't think of a boiler plant until something breaks down and even then our interest often doesn't go further than to have the trouble repaired in the quickest and cheapest way so the plant can be put back in service. We have become so accustomed to consider service rather than cost, not only in the mechanical department but in all others as well, that a scandalous amount of fuel is being wasted annually, the price of which could have been saved without in the least interfering with the service. We don't seem to know that it would be much easier for the engineer, and certainly more profitable for the hospital, to fix a few stubborn radiators than to work his head off in the boiler room shoveling perfectly good coal out of a dozen open windows.

If the hospital were to hand us the combination of the safe, we could not possibly, even if we wanted to, get away with as much money as we are spending daily, now that we know the combination of the steam valve, the electric switch and the water faucet.

The demand for better light is increasing yearly by leaps and bounds. When electric light a few years ago supplanted gas light everybody thought that the acme of perfection had been reached as far as illumination was concerned. Yet if one of the carbon lights of yesterday were handed to any one of us to replace the electric lamp we are now using, we should certainly consider ourselves groping in the dark. This constant craving for better light is increasing the demand for electric energy and the cost of illumination as a whole. If we are willing to pay the additional cost for better light when we need it, we should be equally willing to reduce the cost by turning it off when we don't need it.

Do Not Waste Electric Current

If good light is needed anywhere, it is in the hospital operating room. The light here must be diffused to avoid glare, and should be so arranged that it will cast no shadows. In other words it must resemble daylight as nearly as possible. To accomplish this we find that in many hospitals as much as 2,000 watts and more is being used for illuminating each operating room. Of course it goes without saying that that much light should not be turned on until absolutely necessary.

In one power company office I saw the sign, "Kindly turn out the light when leaving the office; we need the current to sell." If such a sign is necessary in a light company's office, I am sure it would not be amiss if hospitals would do likewise by saying, "Please turn out the lights when leaving the room; we cannot afford to buy all the current the light company wishes to sell."

The reason it is so hard to conserve heat, power and light in a hospital is that the attendants do not look upon these commodities in the terms of money. To them it is just so much black coal to be shoveled, so much steam wanted or so much light which we simply cannot get along without.

A lot of money will be saved by hospitals when the individual members of the various departments see the necessity of reporting to the proper authorities all appliances that refuse to "quit operating," as they now report those that refuse to operate at all.

Midland Hospital Products are all manufactured with special care—each one is sold on a "quality first" basis—

Lohador *Liquid Soap*

is pure soap, made from Cochin Cocoanut Oil, Castor Oil, C. P. Glycerine and Potash, imported from Germany. Thoroughly filtered and purified, it is aged for six months. Lohador Liquid Soap is mild and gentle to the skin. A Midland basic product, Lohador Liquid Soap is economical as it may be diluted to any desired strength. The favorite liquid soap for general hospital use.

HOSPITAL

Creolicide

A Powerful Germicide

Always uniform in purity and strength. Hospital Creolicide is standard in a great many hospitals and institutions. A product that is giving universal satisfaction because of its high quality and economy.

FOR TILE, MARBLE AND TERRAZZO

Tileoleum

The Perfect Cleanser

Will keep floor and walls spotless. A penetrating liquid, Tileoleum loosens and removes the hidden dirt deep within the pores of the tile.
A few cleanings with Tileoleum will convince you of its effectiveness.

Midland Sales Representatives are located in all principal cities. An inquiry to the home office will put you in immediate touch with the one nearest you, or, order direct.

Midland Chemical Laboratories, Inc.

Dubuque, Iowa, U. S. A.

INFRA-RED BAKERS

Edmands Infra Red Bakers

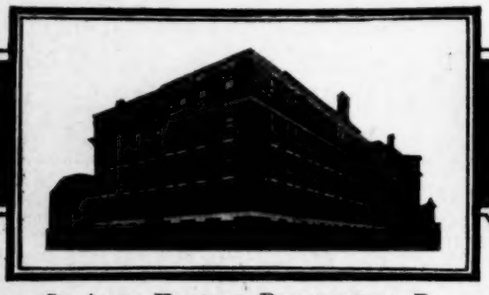
are fitted with the new EDMANDS INFRA-RED UNITS. Adjustable to any part of the body and have three heat controls.

Edmanlite

An INFRA-RED hand lamp fitted with 2 180 Watt Edmands INFRA-RED UNITS permitting 2 degrees of heat. For sale by principal dealers throughout the U. S. and Canada. Send for price lists.

WALTER S. EDMANDS

27 PEARL ST. BOSTON, MASS.



ST. AGNES HOSPITAL, PHILADELPHIA, PA.

Another Notable Installation of

BRUNSWICK-KROESCHELL REFRIGERATION

Each month there will be pictured in this advertisement a modern hospital whose refrigeration problems have been solved by the installation of Brunswick-Kroeschell Refrigeration.

Our experience in this field, extending over a period of thirty years, is at your service. Send for our Bulletin No. 203 "Refrigeration for Modern Hospitals"—address Dept. K., Brunswick-Kroeschell Company, New Brunswick, N. J.

BRUNSWICK-KROESCHELL COMPANY

Refrigerating & Ice Making Machinery

NEW BRUNSWICK, N.J. - CHICAGO, ILL.

As a rule the only appliance ever reported for refusing to quit is the water faucet, not so much perhaps on account of the money running down the sewer as on account of the annoyance. Nothing grinds on a person's nerves as much as a leaking water faucet.

The one-half inch water line supplying the cold coil in our water sterilizer is, however, quite another thing. When we turn this line on full force to cool the sterilizer we don't see the water and, as the saying goes, "What the eye does not see, the heart does not grieve about." Too often we let this water run until long after the sterilizer has been cooled, thereby wasting more water in one hour than fifty leaking water faucets can waste in a day.

If hospital authorities will continue to call to the attention of their everchanging personnel the necessity of treating these commodities as if they themselves had to pay for them, it is my opinion that the cost of supplying a hospital with modern conveniences will be greatly reduced.

Some years ago a well conducted hospital put into effect a rigid system of handling food supplies on the floors, especially such items as lemons, eggs and milk. Before long it was found that the actual quantities needed had decreased about 25 per cent, without restricting in any way the needs of the patients.

What One Hospital Accomplished

Another hospital, because of decreased bed capacity, recently put into effect an economy campaign designed to cut operating expenses 10 per cent. Incident to this campaign was a close study of the work done in different departments and the number of people employed, as well as the adoption of strictest economy in the handling and use of all equipment and supplies. In less than six months this campaign had succeeded beyond the expectations of all, and the operating expenses each month were found to have been decreased 12½ per cent.

In both cases the hospitals were typical of the progressive and well managed institutions of the country. The administrators were people of long experience and of more than ordinary ability. They were loath to talk of the savings that they had brought about, fearing that it would be a reflection on the previous administration of the hospital, but they are positive that the savings of 25 per cent on foodstuffs and 12½ per cent on operating expenditures were made.

That hospitals so capably conducted were able to economize to this extent through a little study and a great amount of cooperation, indicates that other hospitals can effect proportionate economies.

Too often we keep our eye on the big things and let the little things go, and sometimes the greatest loss in our institutions comes from the many little items that are either lost or destroyed, usually through carelessness. I presume most of you have a system such as we have in our hospital, of requiring the nurses and employees to bring the worn-out article or the broken article to the supply room before they can get a replacement. Then if an article is lost an explanation must be made. We have adopted the system, too, of charging to the nurses and employees all broken and lost articles, and you would be surprised to know just how much this has cut down our loss. We have slips posted in every department, in every diet kitchen and in other places, and the person breaking an article must sign his or her name, and if at any time an article is broken or lost and the name is not signed the employee is dismissed. Nurses pay for broken thermometers, and if any article is burned up or

Scientific Clinical Data

Invaluable as comment and observation may be there can be little substantial refutation of the claims of clinical photography. These claims are that clinical photographs are scientifically accurate; are not subject to ambiguous interpretation as are written descriptions; are easily, quickly and inexpensively made; are necessary for a wide range of cases and therefore are required for the illustration of really scientific case records.

The design of clinical equipment for making still or motion pictures is substantial and simple. Almost anyone can make satisfactory pictures. This equipment is not extensive or costly. No hospital is truly modern which lacks adequate photographic equipment. The coupon below is for your convenience in asking for a booklet dealing with clinical photography and its practice.

Eastman Kodak Company

Medical Division Rochester, N. Y.

Gentlemen: Please send me "Clinical Photography" free; a 51-page book explaining the applications of photography in hospitals and the methods of use. Please have one of your Technical Advisers call on us. There is no obligation implied in this request.

Name..... Institution.....

Address.....

A MODERN NEED

Hypodermic Syringe and Needle Sterilizer

St. Luke's Hospital (Pattern) Chicago

Price $5.00 each

$54.00 Dozen

This newly designed, all metal, self-contained, hypodermic outfit is the most satisfactory and practical set for the administration of sterile hypodermic solutions on the market. Convenient for use in either wards or private rooms.

Made by **SHARP & SMITH**
GENERAL SURGICAL AND HOSPITAL SUPPLIES
65 East Lake Street, CHICAGO, ILL.

Formula

999

Hospital Cresylic Compound

A Highly Effective Sterilizer and Disinfectant over Three Times More Powerful than Carbolic Acid.

Formula 999. Standard, tested, Cresol germicide produces clear solutions in the various dilutions, —bacteriological value greater than Liquor Cresolus Compositus.

Made from Cresol, fractionated according to our specification, which produces this added sterilizing power. Ideal for operative work, sterilization of instruments, etc.

We are basic manufacturers and exercise the closest laboratory control to guarantee uniform quality in every gallon.

$1.10 Per Gallon

in 55 gallon Drums

Money back guarantee—If No. 999 Cresol Compound does not give you complete satisfaction, return the Drum at our expense for credit in full—sample gladly submitted.

The GERSON STEWART CORPORATION
3547 East 76th Street
Cleveland, Ohio

otherwise destroyed on the floors through carelessness, and the responsibility cannot be fixed on a certain person, then the nurses on that entire floor must take up a collection and pay for the article.

This may seem to your minds a little bit hard on the pupil nurses, but it has had a tendency to reduce our loss materially and I believe that hospital administrators are justified in taking such action because, as you well know, too much of our loss is due to nothing but carelessness.

We have gone into this matter pretty thoroughly and we are going to try a new plan in the near future. We are going to have a contact nurse in our school who will go into every department of the hospital, even into the boiler room. We feel that she will find out things that she never thought of before and will bring information back to her fellow workers. We feel that the girls, when these things are brought to their attention, will take more interest in saving. Too often our engineer, about ten o'clock in the morning, will be called to fix a leaky faucet and just about that time he is trying to get up a good head of steam so that the laundry machinery can run efficiently and so that there will be plenty of steam for sterilizing. We feel that this contact nurse will tell the other girls that they can save time, which means money, by doing things in a systematic manner. We believe it will mean more cooperation in every department. Then we intend to let her learn what every item costs, and this word will go back to the pupil nurses. Too often they do not realize what things cost. They just see them there and give no thought to the financial side. We feel also that she can take to each department the nurses' side of many questions, and we hope that we shall have a better spirit of cooperation between the nurses and the department heads. As I said, this is going to be an experiment and I do not know how it will work out.

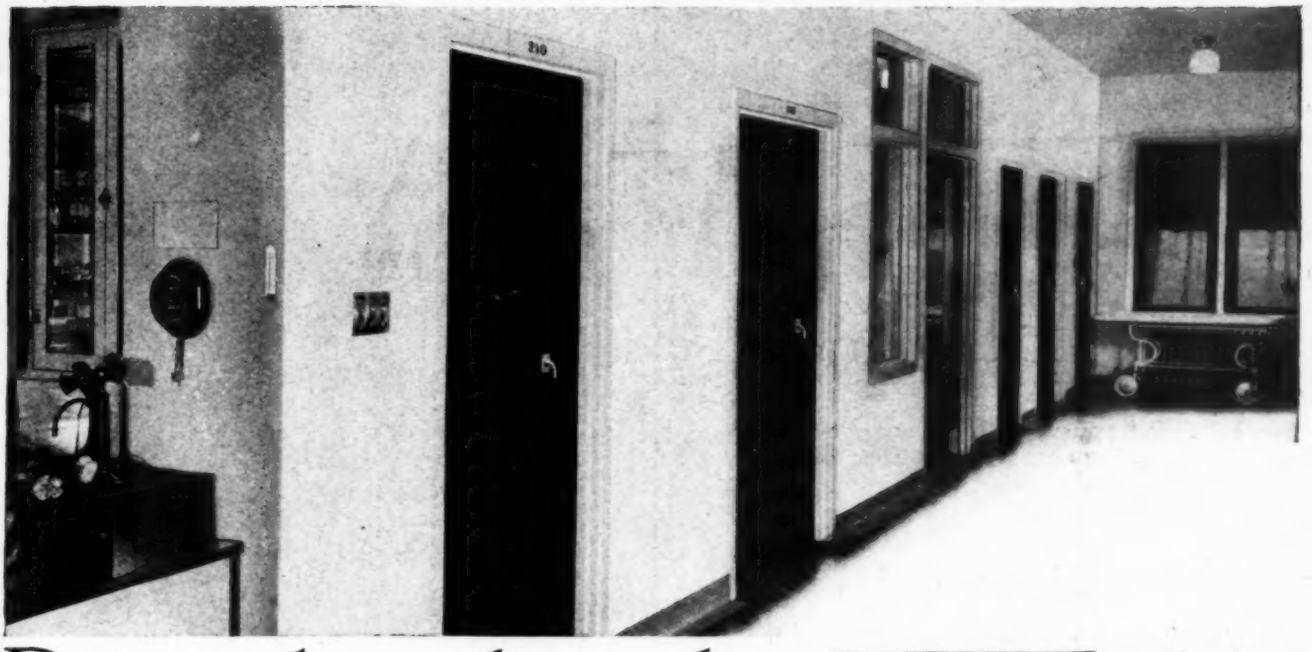
If any of you have an incinerator you will be interested in the following. We were missing hot water bottles and other things in one of our buildings that is equipped with an incinerator, and we could not find out what had become of these items. Finally we put a man on the incinerator chute and we found many things were being sent down this chute just through carelessness. Now this has stopped, and in place of these things being burned up, what little does come down is sent back to the floors, and our loss has been reduced almost to nothing.

Simplicity of Operation Features This New Premature Infant Ambulance

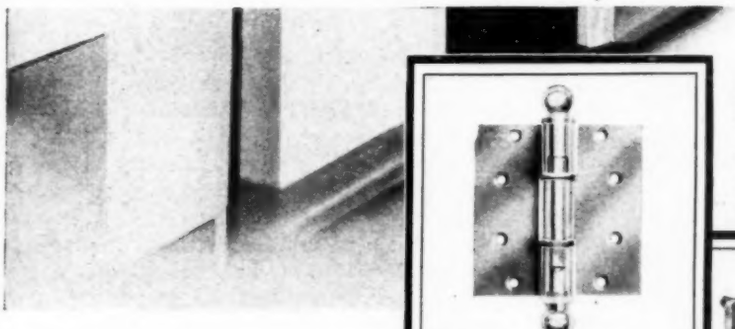
By JULIUS H. HESS, M.D.
Chicago

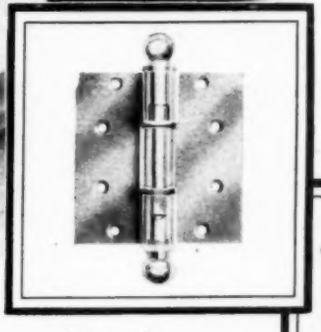
The care of premature infants is one of the difficult problems confronting the hospital in rendering proper service and in maintaining throughout its more publicly apparent contacts a desirable reputation for professional competency. Prevention of thermal shock during transportation is frequently a major element of that problem. Many infants are lost during the fateful first hours after birth, either through carelessness, or because of the lack of suitable equipment facilities.

The ambulance is designed to enable the hospital to protect the premature infant under the conditions encountered in the home and in transportation by railroad or automobile. It is heated by electricity with thermostatic control. The thermostat is adjusted from the outside by a key, which may be removed to prevent tampering by



Doors that obey the QUIET sign



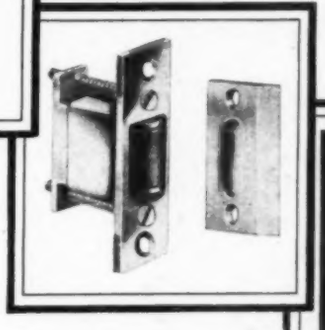


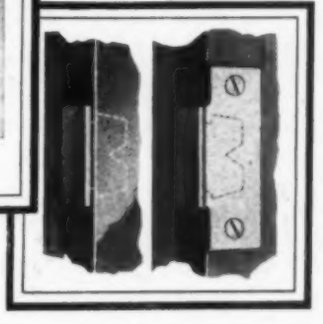
Here are the three units which make the operation of hospital doors truly modern.

FIRST—*The McKinney Friction Control Hinge which holds the door in any position and prevents slamming.*

SECOND—*The McKinney Noiseless Roller Catch takes the place of the metal latch and holds the door securely in its closed position. Ideal for Arm Pull operation.*

THIRD—*McKinney Rubber Door Stop which acts as a cushion for the door as it strikes the stop. Designed for metal trim (left) and for wood trim (right).*





McKINNEY Hospital Hardware was designed to control the operation of doors—to make "quiet" reign despite human forgetfulness or the capricious breeze. Hospital Consultants have expressed their amazement that such complete efficiency has been accomplished by a device so simple in design and so lasting in effectiveness. The first cost is the only cost. There is no upkeep. Nothing protrudes from the door or frame, inside or outside, except the usual hinge barrels.

A complete equipment consists of:—*First,* three McKinney Friction Control Hinges per door which maintain just enough "grip" within themselves to hold the door in any position. The door cannot slam, yet it may be opened or closed with little effort. *Second,* a McKinney Noiseless Roller Catch which takes the place of the metal latch ordinarily used and makes possible the use of Arm Pulls for opening or closing doors, leaving the hands free.

Third, three McKinney Rubber Bumpers for door stops which prevent noises caused by the door striking the stop.

This Modern Hospital Hardware proves its advantages conclusively and without the need of persuasive salesmanship. At your request a trial door is equipped without cost or obligation. Thus you become acquainted with its merit under your own conditions.

McKINNEY *friction control* HINGES

Some hospitals which have been equipped with McKinney Friction Control Hinges

Beloit Hospital	Beloit, Wis.
Beth Israel Hospital	Newark, N. J.
Coney Island Hospital	New York City
Lutheran Hospital	Fort Wayne, Ind.
Maternity Hospital	Toledo, Ohio
Passaic County Hospital	Paterson, N. J.
Princeton Hospital	Princeton, N. J.
Quakertown Hospital	Philadelphia, Pa.
St. Joseph's Hospital	Paterson, N. J.
U. S. Veterans' Hospital, East Northport, L. I., N. Y.	

McKINNEY MANUFACTURING CO., Pittsburgh, Pa.

Name .....

Address .....

M.H.3.28

☐ I will permit you to equip a trial door in our hospital with McKinney Hospital Hardware.

☐ Send literature on your hospital hardware.

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Training
Class Emblems

Avail yourself of our experience in designing and manufacturing pins of unusual character for hospital training classes in all parts of the country.

Class Rings—Diplomas

Samples—Sketches—Ideas
cheerfully furnished.

Write for Catalog

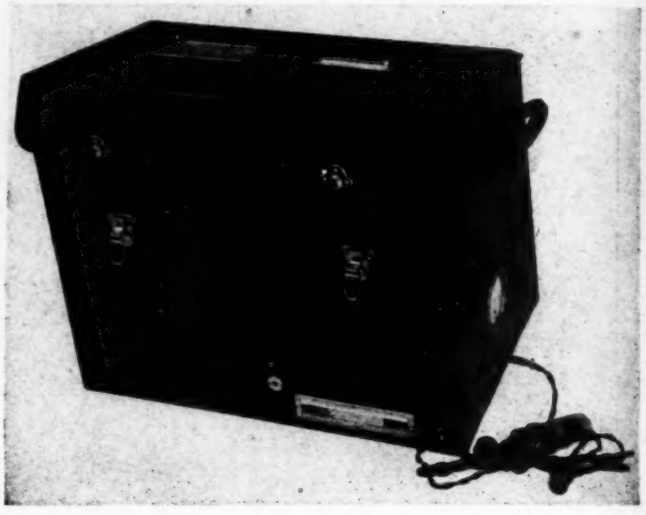
The Metal Arts Co., Inc.
812 Portland Ave. Rochester, N. Y.

EQUIPMENT FOR
PREPARING and
SERVING FOOD

Planning
Engineering
Designing

BRAMHALL·DEANE·CO.
261-5 W. 36th Street
NEW YORK CITY

unauthorized persons. The heating element is composite in construction, permitting the use of the 110 volt light current, the 32 volt Pullman car current or the 6 volt current of the automobile battery. A pilot lamp indicates the proper functioning of the heating equipment. A dise



thermometer, visible from the outside, indicates the temperature within. The walls are well insulated to eliminate the dangers that might arise from sudden temperature changes.

The ventilation system includes two air vents with adjustable shutters. Fresh air enters the intake vent in the lower section of the side wall and passes through a conduit to the heating element where it is warmed. The warm air then circulates upward into the ambulance proper, producing an even warmth. The outlet vent in the top wall, or cover completes the circulation.

A window in the top permits observation of the infant, and the ambulance interior may be illuminated by a small light controlled by an outside push button.

The equipment provides plenty of room, yet it can be easily carried. It is designed for simplicity of operation and to provide an apparatus that may be made ready on short notice, with no involved preparation. It is structurally substantial, and the covering is made of black leather.

Caring for Entrances

By E. I. ERICKSON
Superintendent, Augustana Hospital, Chicago

The main entrance of Augustana Hospital, Chicago, is cared for by a man whose duty it is to clean the marble floor and stairway between six and seven o'clock each morning. A special marble soap is used for this purpose. The glass in the doors is washed and the woodwork and hardware are polished.

The main lobby consists of two large rooms, one on each side of the open stairway. The floor is of terrazzo, and is partly covered by large rugs measuring 13 feet 6 inches by 18 feet. These rugs are cleaned each day with a carpet sweeper and twice a week with a vacuum cleaner. The vacuum cleaner is also used occasionally on such of the furniture as is upholstered.

The furniture is carefully wiped each day and polished when necessary. The lobby has marble columns and wainscot, which are wiped daily and washed at intervals. The portions of the floor not covered with rugs are mopped at least once each day. In bad weather it is necessary to

We Bridge the Gap

Between the two extremes—too large and costly Equipment, resulting in waste, and too small which means inefficiency. We suit Equipment to your individual needs. It is designed to serve your purpose.

Hurley Hospital Laundry Service

makes possible your own Hospital Laundry, properly planned and fitted with Equipment right in type and in size to do your work, resulting in the greatest

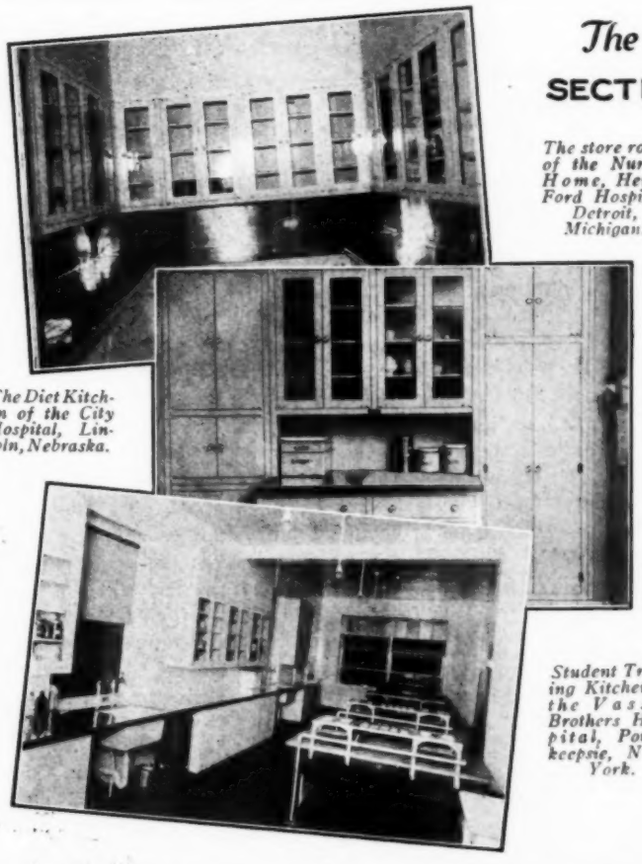
CONVENIENCE — EFFICIENCY — ECONOMY

Our plan will interest you. Write us today.

HURLEY MACHINE COMPANY

CHICAGO

New York **Toronto**



The store room of the Nurses Home, Henry Ford Hospital, Detroit, Michigan.

The Diet Kitchen of the City Hospital, Lincoln, Nebraska.

Student Training Kitchen at the Vassar Brothers Hospital, Poughkeepsie, New York.

The **WHITE HOUSE** *Line*

SECTIONAL UNIT STEEL DRESSERS

WHITE House Units are used whenever food is stored, prepared or served. They are made entirely of steel — moisture-proof, fire resisting and germ proof. Three coats of baked white enamel make them sanitary and easy to keep spotlessly clean. Because of the wide variety of size of the White House Line, any space can be filled simply by combining Standard Units. We will be glad to submit sketches and estimates of White House Units to fill your requirements.

Janes & Kirtland, Inc.

Est. 1840

101 Park Ave. **New York, N. Y.**

For complete index of advertisements refer to the Classified Directory

Modern Hospitals *for* Modest Incomes

The Alabama Spirit

AFTER a three-year experiment in the management of the Montgomery Memorial Hospital, the Southern Methodist Church in Alabama and Western Florida has decided to double the bed capacity at Montgomery and also erect a new $500,000 unit at Birmingham.

Giving special attention to the accommodation of patients who represent our great Middle Class with no free beds, as such, and only a few high priced rooms, Montgomery Memorial Hospital has met a great demand at no sacrifice of service. Excepting for the $12,000 in free service, the Hospital operated without a loss last year.

More Room *and* Another Hospital

Montgomery Memorial soon recognized that its 80 beds must be doubled to meet the demand of those who wanted the best but who could pay only a very moderate price. Then, too, with double capacity the percent of cost of operation would be reduced almost to the minimum.

A new addition was planned—and then those generous Southern Methodists said, "What is good for Montgomery should be good for all of Alabama"—so it was decided to establish another Memorial Hospital in Birmingham—and after a while, perhaps, one at Mobile and one at Pensacola.

A campaign to raise One Million Dollars by public subscription is now being organized under our direction—and the prospects for success are very encouraging.

THE HERBERT B. EHLER COMPANY
12 East Forty-first Street
New York City

repeat this process two or three times. In cleaning the terrazzo floor we use a neutral soap.

The reception room, accounting offices, admitting office, telephone room, record room and private offices are cared for by a maid who performs all of the work, such as mopping, dusting and polishing. She is also responsible for the appearance of the rooms at all times and her work is so arranged that by beginning at 5:30 a.m. the various offices are ready for occupancy when and as needed by the day force. This means that all floors are thoroughly cleaned and furniture wiped not later than 9 a.m. The maid then devotes her time to cleaning in such places as will not interfere with the routine procedure of business.

The dining room also has a terrazzo floor, which is mopped each forenoon by a janitor, who also cleans the corridor on the floor on which the dining room is located. The dusting and general cleaning in the dining room are done by the waitresses each forenoon.

The walls and ceilings in these rooms are washed on an average of twice a year and redecorated every two or three years.

The work for the person caring for entrance, lobby and waiting room is so planned that attention can be given to these places at frequent intervals throughout the day. Where people are constantly passing to and fro it does not take long for a room to present an untidy and disordered appearance. Hence the furniture must often be placed in position and extra cleaning done several times a day.

Filing Laboratory Reports

By EDWARD LANE
New Britain, Conn.

Almost innumerable forms for the reporting of laboratory procedures have been devised from time to time with varying degrees of satisfaction. Some are clumsy and consume an enormous amount of space on the chart but are, apart from this fact, satisfactory. Others go to the other extreme and are altogether too inadequate for the use of any institution or practitioner who has any interest in his patient's welfare from a laboratory point of view.

The form that consists of a single sheet of paper ruled into numerous spaces and with a corresponding number of items tabulated on it, is still in use by some of the otherwise modern institutions. But at best such a form is inadequate, for the pathologist cannot append his report with a notation on the interesting points of the examination, or attract the attention of the doctor to some important phase of the report.

A form that requires the use of a separate sheet for each report allows plenty of room for an adequate report and also for comment, but in this case we hear from the hospital filing department that the charts are too bulky, especially when the report forms are not as long as the other sheets on the chart, for in this case the top of the chart is much bulkier than the bottom and the charts do not file well.

The difficulties attendant upon this type of form have been eliminated in the one described below, while ample space is allowed for reporting.

The report form consists of variously colored sheets of paper with the name of the class of examination that they cover printed on the bottom right-hand corner, where both it and the color of the sheet act as a double index for the reports. A separate sheet is used for each examination, the reports being attached to the chart according to

When life depends upon your skill

THOSE precious moments when all your faculties must be concentrated upon the technic of the operation you are performing should not be marred by a single doubt. Your trust in your assistants is a guarantee that your implements have been properly sterilized. *But to what extent can you depend upon your ligatures?*

For thirty years Armour Laboratory has kept pace with the increasing and more exacting demands of medical science. The ligatures it is supplying hospitals throughout the world are reputed to be the finest produced. The great resources of this institution make it possible to apply extraordinary skill to the selection of material and the production of ligatures. They are strong — smooth — sterile and uniformly absorbed. You can use these ligatures with absolute confidence!

When you have cases indicating the use of pituitary liquid, you may have equal confidence in it if it bears the Armour label.

ARMOUR AND COMPANY *Chicago*

PHARMACEUTICAL PRODUCTS

Fifth Avenue Hospital

Uses Lamberton China

Outcasts!

A cracked or chipped dish has no place in the thoroughly modern hospital.

LAMBERTON CHINA—having minimum breakage replacement—is the most economical hospital china made.

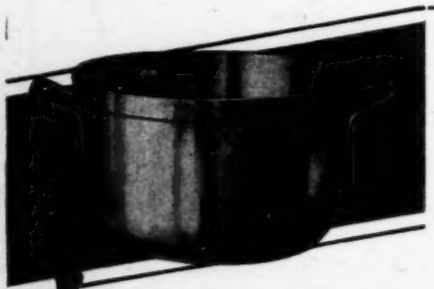
For complete information write to

SCAMMELL CHINA COMPANY
Trenton, New Jersey

The China of Distinction

New York
70 E. 45th St.

Chicago
17 N. Wabash Ave.



It lasts!

Wagner cooking ware heats faster and more evenly because it is made of fine aluminum, process hardened. But it outlasts other ware because of these three Wagner features:

1. It is cast in a mould. Hence it is stronger—just as cast iron is stronger than sheet iron.
2. It is process hardened—as airplane metal is hardened.
3. It is reinforced at the vital points, bottoms and rims. The bottoms are thicker than the sides. This means multiple strength ware that gives extra years of service without warping or burning through.

Wagner Cast Aluminum Ware retains heat longer than copper; needs no retinning; is sanitary, easily cleaned and kept bright and shining.

Your supply house has Wagner Ware—or order direct.

Write for your copy of Catalog No. 45

WAGNER CAST WARE

WAGNER MANUFACTURING CO.
Sidney, Ohio

date and number. In this way the reports of the same type, such as daily urines, can be instantly found and the consecutive days' reports compared.

The first report to be attached to the chart is fastened by pasting its upper edge only to a sheet of the same size as the remainder of the sheets on the chart, in such a way that the bottom edge of the report coincides with the bottom of the blank background sheet but is free from it. The second report is pasted in a like manner, but one-half inch higher up the background sheet than the previous report, so that the name of the previous specimen and the color of its sheet are plainly visible at first sight. Other sheets are attached in a similar manner, each one-half an inch above the preceding one. In this way a large number of 8½"x4½" reports can be attached to a single sheet of paper. The finished chart is of the same thickness throughout, because if only a few reports are attached their thickness is negligible, while if there are several, all are arranged on top of each other but not all at one end of the chart. Reports can be easily compared as they are all in rotation, and each form of report can be singled out from the others by means of the index words and colors.

The colors were chosen in such a way that they would be suggestive to the stranger who was called upon to find reports. For instance pink was chosen for blood and yellow for urine. Green, which immediately brings the thought of bile to the mind, was used for gastric analyses, and white for sputum on account of its association with the white plague. Feces are usually brown and for that reason so also are the feces reports. Buff was decided on for spinal fluid, for want of a better color which would not too nearly match any of those already in use, and grey was used for pathology. A blue form was printed for miscellaneous reports not covered by the other forms.

The forms are all printed with the same words, with the exception of the identification word at the bottom, thus cutting down the expense of blocked charts, such as some institutions use. Spaces are provided for the patient's name, ward, and serial number, the laboratory filing number and the date of the specimen.

New Syringe for Local Anesthesia

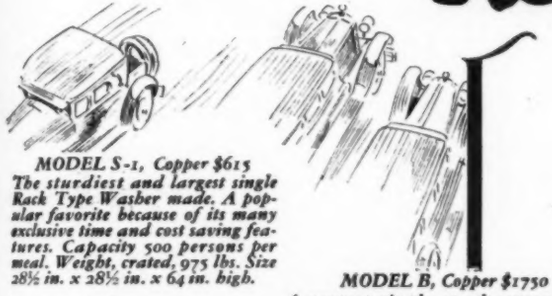
A new type of syringe for local anesthesia has been designed by Dr. George P. Pitkin, surgeon in chief, Holy Name Hospital, Teaneck, N. J. This syringe is a self-filling, continuous-flow syringe, permitting the injection of large amounts of anesthetic solution in a comparatively short time, without removing the needle from the tissue or detaching the syringe.

There is an opening through the center of the piston and piston stem, which allows for the intake and continuous flow of the anesthetizing fluid. This flow is controlled by a valve in the top of the piston stem just below the thumb ring.

The three-ring finger rest makes it possible to fill and empty the syringe with one hand, and a device locks the needle on the tip of the syringe. Internal equalizing springs distribute the pressure exerted by the finger rings.

The barrel of this syringe is made of special hard resistance glass and the plunger is of noncorrosive steel. Noncorrosive steel and the special hard glass have the same coefficient of expansion and contraction and it is therefore possible to sterilize this syringe without removing the plunger.

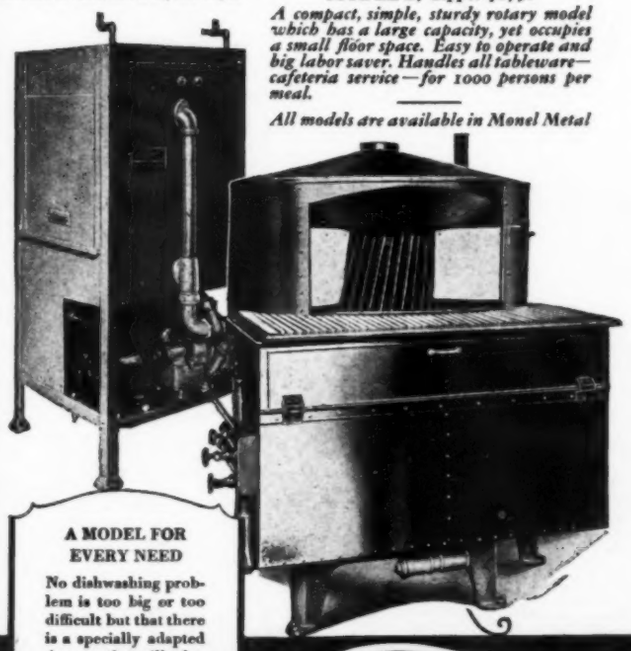
Keep Traffic Clear!



MODEL S-1, Copper $615
The sturdiest and largest single Rack Type Washer made. A popular favorite because of its many exclusive time and cost saving features. Capacity 500 persons per meal. Weight, crated, 975 lbs. Size 28½ in. x 28½ in. x 64 in. high.

MODEL B, Copper $1750
A compact, simple, sturdy rotary model which has a large capacity, yet occupies a small floor space. Easy to operate and big labor saver. Handles all tableware—cafeteria service—for 1000 persons per meal.

All models are available in Monel Metal



A MODEL FOR EVERY NEED

No dishwashing problem is too big or too difficult but that there is a specially adapted Autosan that will solve it—efficiently and economically. Six splendid models—3 types (rack, rotary and conveyor) from $615.00 to $3200.00.

JUST as the traffic officer regulates, smooths and speeds the flow of motors and pedestrians, so, too, will a Colt Autosan Dishwashing Machine positively and profitably clear and smooth the flow of dishes through your kitchen! It will overcome costly confusion, delays, mishaps during the jam hours. It will lower labor costs, minimize breakage, insure cleanliness, speed service and summarily protect business stability and prestige. See your Kitchen Equipment House, or write for detailed data on the six Colt Autosan models—conveyor, rotary and rack types—each a Colt product with nearly a century of mechanical skill and excellence built into it.

COLT'S PATENT FIRE ARMS MFG. CO.
Autosan Division
Hartford, Connecticut

COLT AUTOSAN

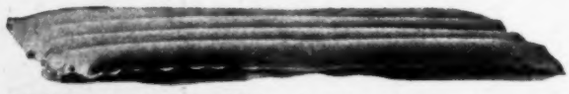
A COLT PRODUCT

"The Machine That Washes Tableware *CLEAN!*"

AIRUBBER PRODUCTS

for the
GREATER COMFORT
of the
PATIENT

MADE carefully of the finest materials—vulcanized, not cemented, and especially designed to fulfill specific functions perfectly, they give complete satisfaction and long, dependable service. Easily and quickly washed, sterilized or fumigated, these aids to patient, doctor and nurse are indispensable in many cases, of great comfort and practical value in others.



AIRUBBER MATTRESS—Cloth inserted type—maroon rubber aseptic surface. Supports a person's weight evenly and gently yields to pressure. Standard for hospitals and ambulances. These mattresses are sanitary, light, durable, flexible and reliable. The *corrugations* provide perfect ventilation. Eight styles. One to three sections. 22″ x 40″ to 36″ x 76″.

AIRUBBER INVALID AND HOSPITAL BACK REST

Illustrated at right

Extra deep air space for small of back and shoulder blades. Conforms to body, allowing perfect relaxation. Protects, rests, eases and comforts. Channels for air circulation, eliminating perspiration in hot weather. Durable, rubberized materials. 16½″ x 22½″ inflated. Weight 23-25 oz.

Airubber Em-Dee Obstetrical and Operating Cushion

New, sanitary, smooth, improved cushion of generous size, with easier drainage, greater convenience and extraordinary durability. Finished in maroon rubber. Inflate with a few breaths. Size inflated 24″ x 24″. Deflated, rolls to 8″x8″x2″. Weight only 3¾ lbs.

AIRUBBER COMFORT RING

Prevents, and helps cure bed sores. Gives perfect ventilation. New double-ring overcomes rolling, allows a more even distribution of weight. Made in four sizes of cloth inserted smooth maroon rubber. 12½″-18″ in diameter. Weight 8 to 14 ounces.

AIRUBBER HOT-WATER-and-AIR CUSHION

Maroon rubber surfaced, aseptic, this combination cushion has separate inlets for air and hot water. Filled with hot water it equals six ordinary hot water bags, and it stays in place. Filled with air only, it is a luxurious cushion or pillow. Large enough to cover chest or back completely. Flexible enough to wrap round a limb. 16″ x 18″ inflated.

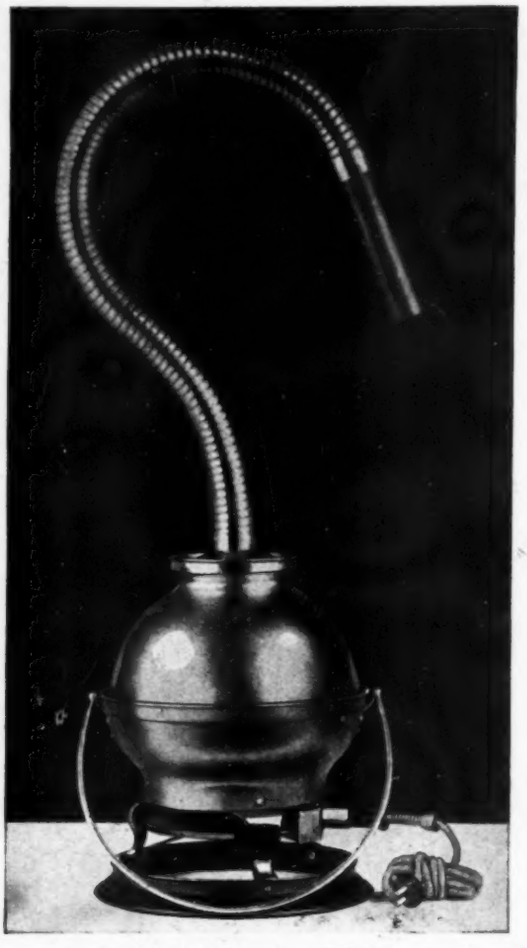
AIRUBBER products are honestly built for an honest purpose. Your hospital supply house will be glad to show you them, or write us direct.

NEW YORK RUBBER CORP.
ESTABLISHED 1851
Airubber Department
BEACON NEW YORK

An Electric Vaporizer That Has Many Advantages

An inhalator that cannot scald a patient or nurse, that stands on the floor with a wide base that has no exposed fire and is so constructed that "nothing happens if the kettle accidently boils dry," has recently been put on the market.

This new electrically operated vaporizer has many other features that are worth considering. For instance, it holds sufficient liquids to operate continuously for twelve



hours, has a flexible tube and a bakelite nozzle that is never too hot to handle, the vapor is less suffocating to the patient, because air is mixed with the steam, and the temperature of the steam is also moderated.

The specifications as listed in the manufacturer's literature are as follows:

Electric heating unit, 110-120 volts, 600 watts. Specially armored and insulated.

Cord is six feet long, with plug-in attachment close to inhalator, the same as an electric iron. May be attached to any light socket or base plug.

Heating unit is enclosed in a copper shell.

Kettle is made of spun copper and holds 6,250 c. c.

Cover has holes to admit air.

A safety splash plate on the cover prevents the liquid from sputtering out in case the kettle boils dry.

The flexible tube is made of brass.

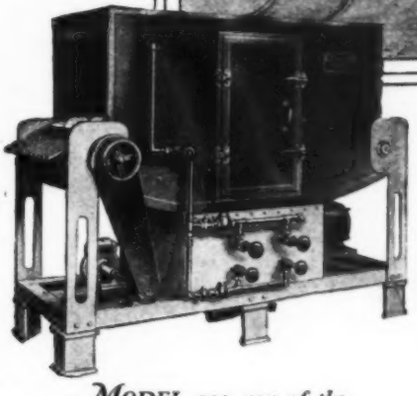
The inhalator is about four feet high. It should always stand on the floor for safety, never on a chair.

Its weight, empty, is nine pounds.

Champion at The De Witt Clinton

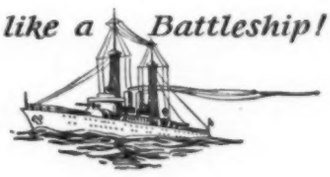
THE cleaning of tableware at The De Witt Clinton, Albany, New York, is a duty entrusted exclusively to Champion Dish Washing Machines. Three different models are employed: a large conveyor type to handle ware used in the main dining room; another conveyor type for the cafeteria; and a smaller basket-feed machine for glassware only. Because Champion has, from the first, demonstrated its efficiency and economy, its service has been extended from one department of this hotel to another.

There are many unusual features about Champion Dish Washers that absolutely assure users long and uninterrupted service. Features that do away with the need of constant care and attention to keep the machine running, among which is the heavy *cast iron* tank (galvanized after casting); the oil-less bearings; accessible and easily removed parts; and the utter simplicity of Champion construction throughout.



MODEL 500, one of the three machines used by The De Witt Clinton. This is a conveyor type, double tank machine, with a capacity of 12,000 pieces per hour. Installations were made by Nathan Straus & Sons, New York City.

Built like a Battleship!



Institutional Managers, interested in reducing costs, should write for "Dishwashing Mathematics," a booklet outlining simple methods of determining just how much the washing of dishes is costing you. It also furnishes complete information concerning Champion Dish Washing Machines. CHAMPION DISH WASHING MACHINE CO., HOBOKEN, NEW JERSEY. 1358 Builders Bldg., Chicago

CHAMPION
Dish Washing Machines

Jewett Refrigerators are Famous for the Company they Keep

A few among many notable Jewett Hospital Installations
Mt. Sinai Hosp. New York
New Bellevue Hosp. New York
Rockefeller Inst. New York
Cleveland City Hosp. Cleveland
Univer. of Chicago Hosp. Chicago
Walter Reid Hosp. Washington, D. C.
Columbus Pres. Hosp. New York
Post Graduate Hosp. New York
St. Luke's Hosp. New York
Buffalo City Hosp. Buffalo
Cornell Med. College Ithaca
J. N. Adam Mem. Hosp. Perrysburg, N. Y.
Rochester Gen. Hosp. Rochester
Jewish Hosp. St. Louis
Southside Hosp. Bayshore, L. I.

Jewett Refrigerators are Built to a Standard of Performance and Long Life rather than to a Price. This fact accounts for the Preference accorded them by leading Hospitals, Hotels, Clubs and Institutions throughout the country.

Without obligation we work hand in hand with those interested in the highest quality refrigeration, preparing illustrations and blueprints based on floor plans and showing Jewetts adapted to unusual requirements. ★ ★ ★

THE JEWETT REFRIGERATOR CO.
BUFFALO, NEW YORK

JEWETT REFRIGERATORS

Book Reviews and Current Hospital Literature

The Normal Diet

By W. D. SANSUM, M.S., M.D., Director, Potter Metabolic Clinic, Department of Metabolism, Cottage Hospital, Santa Barbara, Calif. Second Edition.[1]

This book is compiled from subject matter Dr. Sansum used in lectures to his patients. Eight fundamental principles which he considers important in the selection of a normal diet, are given in the introduction.

Points of importance are discussed in terms that are readily comprehended by the nonprofessional. The scope of the treatise is indicated by the chapter headings, and each chapter is supplemented by several menus: Normal Diet Menus; The Bulk Requirements of the Body; The Acid-Ash Type of Acidosis; The Acetone Type of Acidosis; The Caloric Requirements of the Body; The Protein Requirements of the Body; The Mineral Requirements of the Body; The Vitamine Requirements of the Body; The Water Requirements of the Body.

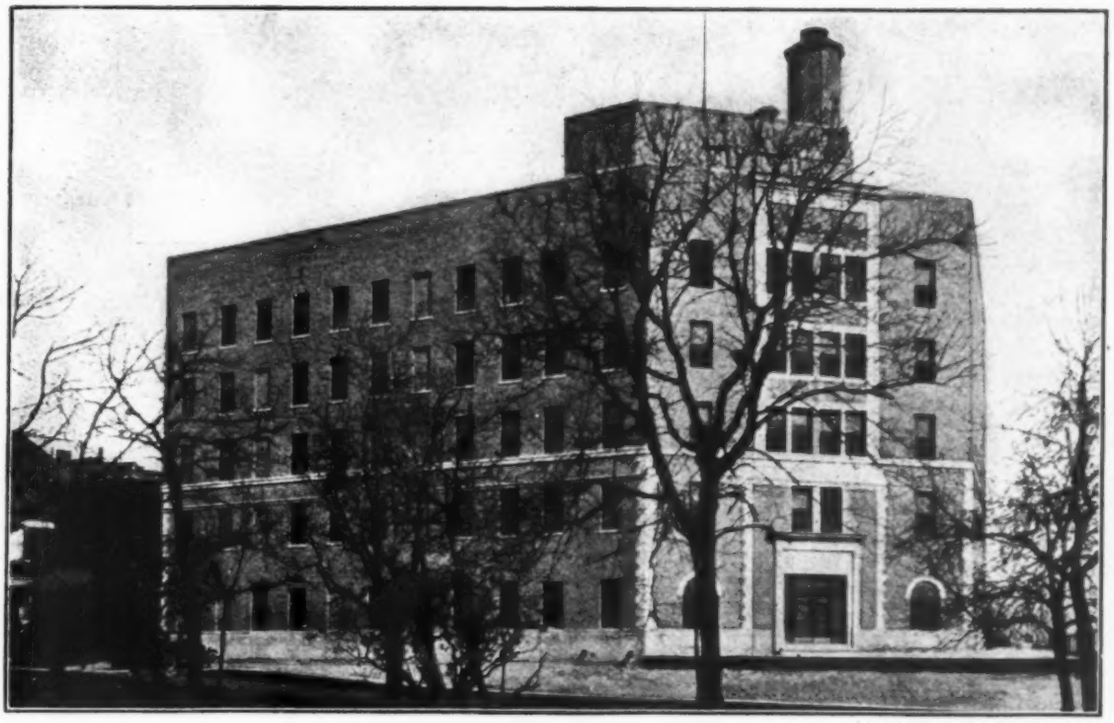
Getting Well and Staying Well

By JOHN POTTS, M.D. Introduction by J. B. McKnight, M.D., Superintendent and Medical Director, Texas State Tuberculosis Sanatorium, Sanatorium, Tex.[2]

John Potts has set himself to the task of presenting to tuberculosis patients, public health nurses and doctors, in simple language, some pertinent facts that he learned in a long and trying experience. His book differs from other books that deal with a similar topic in that it is written by a medical man who views the situation also from the layman's angle. In obtaining the cooperation of Dr. McKnight, the author has as a collaborator a man of long experience in tuberculosis sanatorium work, well qualified to add value to this volume.

The book is comprehensive and complete. It covers in simple form every phase of the subject of tuberculosis, from "Suspecting Tuberculosis" to a final chapter on "Regret or Happiness." The author reveals much of his personal experience. He places blame where blame belongs and gives praise to those who deserve it. He stresses the importance of an intelligent handling of the tuberculosis problem by lay people. He emphasizes the danger of cheap advice and urges the diagnosis of the disease in the early curable stage. He deplores "medical shopping" and points out that there was a time when a doctor could overlook tuberculosis in a patient until the disease was far advanced but the well informed doctor today cannot and will not do such a thing. He approves of "Cleaning the Slate" of misinformation for the tuberculous, and starting anew with a good textbook as a guide,

[1] The C. V. Mosby Company, St. Louis, Mo.
[2] The C. V. Mosby Company, St. Louis, Mo., 1927.



Architects, Frank D. Chase, Inc.

Barreled Sunlight has replaced both paint and enamel in this fine building of the Chicago Memorial Hospital

Why did the Chicago Memorial Hospital paint throughout with Barreled Sunlight?

A three-coat job . . . walls and woodwork . . . in white and tinted gloss and semi-gloss finishes . . . the whole thing done with Barreled Sunlight. *Because this unique paint enamel gives hospitals every advantage of both paint and enamel, without the disadvantages of either . . .*

Beauty—adequate light—resistance to yellowing—lasting cleanliness—ease of application—moderate cost.

Barreled Sunlight Gloss gives a rich enamel finish with a depth peculiar to itself. It has remarkable freedom of flow, whether applied by brush or spray. And its surface is so satin-smooth it washes like tile—without wearing away.

When used in the pure white Barreled Sunlight is guaranteed to remain white longer than any gloss paint or enamel, domestic or foreign, applied under the same conditions.

Barreled Sunlight Flat produces a finish extremely handsome and uniform.

Barreled Sunlight Semi-Gloss strikes a nice balance between the Gloss and the Flat.

Sold in large drums and in cans. For priming, use Barreled Sunlight Undercoat. See coupon.

U. S. Gutta Percha Paint Co., 30-C Dudley Street, Providence, R. I. Branches: New York—Chicago—San Francisco. Distributors in all principal cities.

White or easily tinted

By simply mixing colors in oil with Barreled Sunlight white, the painter on the job can easily obtain any desired shade. In quantities of five gallons or over we tint to order at the factory, without extra charge. For tinting small quantities our dealers carry handy tubes of Barreled Sunlight Tinting colors.

U. S. GUTTA PERCHA PAINT CO.
30-C Dudley Street, Providence, R. I.

Please send us your booklet "Interiors of Lasting Whiteness," and a panel painted with Barreled Sunlight. We are interested in the finish checked here.

Gloss ( ) Semi-Gloss ( ) Flat ( )

Name .....

Street .....

City ..... State .....

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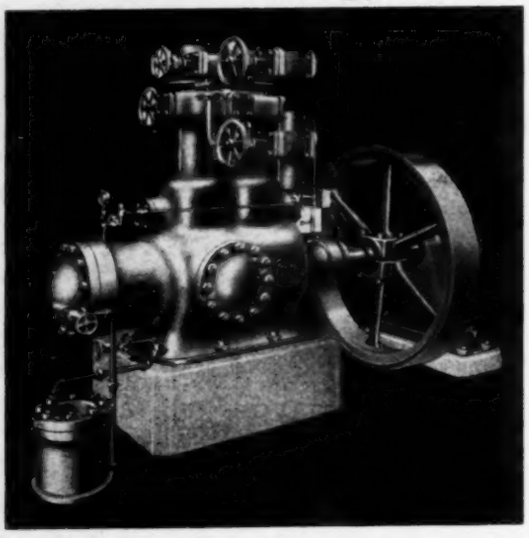


Frick Enclosed Type Carbon-Dioxide Compressor

FRICK

Refrigeration

At last!—a really satisfactory refrigerating machine has been developed, embodying the safety features and other advantages of carbon dioxide, yet free from the operating troubles and expense formerly connected with a carbon-dioxide plant.

This should be welcome news for hospitals in need of an improved cooling system.

Get Ice and Frost Bulletin No. 118-A and read the whole story.

We build ammonia and carbon-dioxide machines of all sizes and types. Installations in over 75 hospitals.

Frick Company
WAYNESBORO, PA., U.S.A.
ICE MACHINERY SUPERIOR SINCE 1882

or a good tuberculosis sanatorium as a residence. He discusses lucidly who should go to the sanatorium. Personal, mental and social hygiene are all touched upon.

The book can be recommended as an excellent gift to any friend whose family has come in contact with the ravages of the white plague or to those who are directly or indirectly interested in this disease. The entire book impresses one with its straightforwardness and honesty.

Mental Handicaps in Golf

By THEO. B. HYSLOP, M.D., F.R.C.S.[1]

Out of the unceasing battle between sportsmankind and Mr. Par, an enormous literature has grown up. This takes the form of poesy and prose, guide book and romance, fact and fiction. Some of it is good; some of it is real literature; some of it is sheer twaddle.

To the medical exponents of swing and stance, Hyslop's little brochure on the mental handicaps of the game of games should come as an unalloyed joy. It is psychologically sound; it is mildly discursive; the style is pleasing and, best of all, it has a keen, kindly, whimsical sense of humor. The various psychological phases of the Royal and Ancient are touched upon, puttaphobia, pot-hunting egomania, tee inferiority complex, the mental stance and golfing hypochondriasis, all receive attention. It's a grand little book written by a doctor for doctors and equally appropriate for hospital workers generally.

Clinical Case Taking

Supplement to Methods in Medicine, by GEORGE R. HERRMANN, M.D., Ph.D., Assistant Professor of Medicine, Tulane University, New Orleans.[2]

This is a compact and excellent volume, giving in extreme detail the subdivisions of the principles that the author has laid down. This feature should recommend the book to teachers of medicine and their students. Hospital superintendents, with the view of improving hospital histories, might well place a copy of Dr. Herrmann's book in the hands of each of their interns.

History taking is an art in itself and many an obscure case can be cleared up by a properly taken and carefully interpreted history. Dr. Herrmann's little volume fills a long felt need and will assist in developing this art.

Books Received

PENDULUM—BABY'S HEALTH DAY BY DAY. Published by the Professional Press, Inc., Chicago.

MATERIA MEDICA AND THERAPEUTICS FOR NURSES. By John A. Foote, M.D., Professor of Pediatrics and formerly Assistant Professor of Therapeutics and Materia Medica, Georgetown University School of Medicine, and Instructor in Materia Medica and Therapeutics, Providence Hospital Training School for Nurses. In Two Parts, Elementary and Advanced. Fourth Edition, Completely Rewritten, Reset and Rearranged to Conform to the Sixth Edition of "A Curriculum for Schools of Nursing," Prepared by the National League of Nursing Education. Illustrated. J. B. Lippincott Company, Philadelphia, 1928.

[1] Williams & Wilkins Co., Baltimore, 1927.
[2] C. V. Mosby Company, St. Louis, 1927.

THORNER'S
Silver Service

Thorner's Silver Service is made of 18% Nickel Silver with a quadruple silver plate. Wears a lifetime. Replacement through breakage is forever eliminated. It is never affected by wear or polishing.

Illustration features Thorner's Improved Three Compartment Hot Water Plate. Tea Set with reinforced bands, hard metal hinges, Silver Soldered and one-piece unleakable bottom. Covered Soup Cup with Silver Soldered handles. Sherbet Dish, Gravy Boat, Individual Napkin Ring and Tray Marker, Bud Vase, Salt and Pepper Shakers and Superior Grade Sectional Plate Flatware.

THORNER BROTHERS

Importers and Manufacturers of Hospital and Surgical Supplies

386-390 Second Avenue
NEW YORK CITY

DISTINCTIVE

A dignified, efficient and distinctive method of marking hospital trays which appeals to the patient's sense of individuality and gives evidence that the institution is using care in keeping every patient's tray and napkin properly identified. It occupies but small space, fitting into the corner of the tray. It provides ample ring space with separate clip for the card. Holder is silver plated on hard white metal; very durable. Cards are specially printed with the name of your institution. Can be supplied in colors for special diets, if desired.

141-A-3—Silver holders, per doz....**$5.50**
141-A-4—Specially printed cards, white only, per 1,000.....**$3.00**
Additional thousands **2.25**
141-A-5—Specially printed cards, any color or assorted, per 1,000.....**$3.50**

The above is a typical example of the many items in hospital service which have been designed by us to improve or economize hospital service.

Will Ross, Inc., offers a complete service in hospital supply, furnishing virtually everything but foods and drugs. If you are not using our catalogue regularly both of us are losing much. May we send you a copy?

A cellulose absorbent that has set new standards of quality, that has brought prices down, and is favored by hospitals because of the convenient way it is packed and the ease with which it can be handled and used. Cheaper, more absorbent and convenient than the best absorbent cotton. Supplied in two, five and sixteen pound rolls or in cut size. Prices on application.

Sanisorb
THE IDEAL ABSORBENT

WILL ROSS, INC.
WHOLESALE HOSPITAL SUPPLIES
459 E. WATER ST. MILWAUKEE

Need Money for a New Building?

Every hospital has in its executive positions trained specialists. Such persons accomplish more in less time than others.

The same principle applies to raising money. Specialists raise more money most economically.

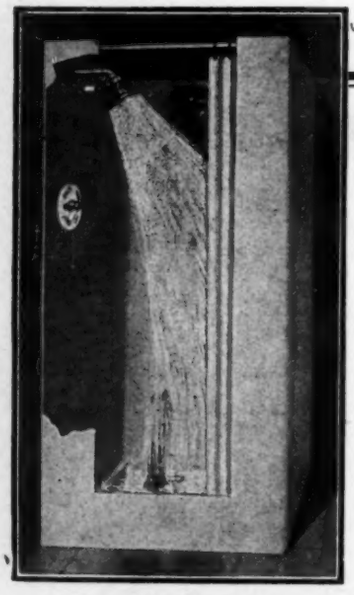
Hedrick, Marts & Lundy offer the experience of a number of men who have successfully raised money in many cities from the Atlantic to the Pacific. They have obtained large sums for new hospitals, for additions to old equipment—or to clear off accumulated debt.

"Financing Philanthropy" quarterly paper, free on request

Campaigns undertaken anywhere. All the many details are carefully directed by our experienced staff.

Tell us your plans.

HEDRICK, MARTS & LUNDY, Inc.
Member Joint Board of Campaign Counsel and Planning
527 Fifth Avenue New York



NIEDECKEN SHOWER STALL
Patented

A Leak Proof Integral Fixture

Equipped with NIEDECKEN SHOWER

The walls of the stall are made of a continuous sheet of No. 10 gauge copper bearing steel which with the riser are welded to the bottom.

After installation is completed, the stall must be finished with waterproof enamel paint.

THE NIEDECKEN SHOWER STALL occupies the Least Space and Can Be Installed Even in a Bed Room.

Write for Bulletin M.H.-15X

HOFFMANN & BILLINGS MFG. CO.
MANUFACTURERS SINCE 1885.
MILWAUKEE, U. S. A.

NEWS OF THE HOSPITALS

Florida

St. Vincent's Hospital, Jacksonville, was recently formally opened. The new hospital, which has been under construction for a year, has a capacity of 200 beds and has cost more than one million dollars.

The Munroe Memorial Hospital, Ocala, has recently been opened for patients. It contains approximately 100 beds and accommodations for both white and colored patients. The old hospital is being converted into a nurses' home. The total cost of the new building, the equipment, the property and the nurses' home was $250,000.

Idaho

St. Luke's Hospital, Boise, is to have a new addition with accommodations for sixty-five to seventy patients. Construction is under way on the new building which will contain a children's department, x-ray and clinical laboratory departments, a lounge and sun deck for patients, kitchen, laundry and boiler house. The new structure will cost approximately $300,000 and will be ready for occupancy sometime during the summer.

Illinois

St. Francis Hospital, Macomb, has increased its capacity to 100 beds through an amalgamation with the Holmes Hospital of that city.

St. Francis Hospital, Evanston, has during the past year increased its capacity to 225 beds as well as adding a children's ward, an emergency ward and a nurses' home.

A new ten-story fireproof building has recently been opened by the Chicago Eye, Ear, Nose and Throat College, Chicago. It will accommodate seventy-five patients.

Iowa

St. Luke's Hospital, Davenport, has a new $125,000 nurses' home which is the gift of Col. and Mrs. George W. French of that city.

Minnesota

Construction is to be under way soon on a new hospital unit for crippled children, a new out-patient unit and a student health service unit for the University of Minnesota, Minneapolis. The crippled children's hospital will be built with a fund created for that purpose by William Henry Eustis, philanthropist, at a cost of $250,000. The balance of the $575,000 available from the fund will be used later for the construction of a clinic and convalescent home for children.

New Jersey

Construction is under way on the new Presbyterian Hospital, Newark. The hospital authorities were able to secure the use of other quarters for the patients now in the hospital. The new hospital will be horseshoe-shaped. It will have a capacity of 201 patients, with room for ninety babies in the maternity department. It will be thoroughly modern and completely equipped in every particular.

JELL-O shows the way to economy in hospital desserts

CHERRY SPONGE

(This recipe makes 70 ½-cup servings. Use twice the ingredients to make 140 servings, etc.)

1 26-ounce package of Cherry Jell-O, Institution size
1 quart of boiling water
3 quarts of cold water
¼ teaspoon almond extract
4 dozen marshmallows, cut in quarters
Few grains salt

Dissolve Jell-O in boiling water. Add cold water, salt, and extract. Chill. Add marshmallows and whip with electric beater until consistency of whipped cream. Pour into individual molds. Chill until firm. Serve with or without plain cream.

CHERRY Sponge is just as delicious as it is inexpensive! And this is only one of many Jell-O desserts that are perfectly suited to hospital menus. There are dozens of appetizing desserts, and salads too, that are easy to make and economical enough for any budget.

A wide variety of tempting dishes can be made by combining Jell-O with cream, fruits and vegetables. Jell-O, served plain, is equally attractive—sparkling clear in appearance, with wonderful flavors from fresh, ripe fruits. The Institution Package makes a gallon of Jell-O—enough to serve from 40 to 50 persons, at a cost of little more than one cent per serving!

Jell-O can be served to everyone in the hospital, and is an especially good choice for patients. It is remarkably easy to digest, and in addition, supplies the body with supplementary protein nourishment. Dietitians recommend Jell-O for almost all cases.

High quality ingredients and purity are unfailing attributes of Jell-O. When buying, see that you get the *genuine*—there is only one Jell-O.

JELL-O
Trademark Reg. U. S. Pat. Off.

FIVE FLAVORS—FROM FRESH, RIPE FRUITS

We will be glad to send you a set of Jell-O quantity recipe cards, prepared especially for institutional use. Just drop us a card with your name and address.

The Jell-O Company, Incorporated
Dept. O. 3, Le Roy, New York

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For complete index of advertisements refer to the Classified Directory

When exercise is lacking and appetite is dull

Post's Bran Flakes, a natural bulk food, has proved itself a dependable corrective of constipation.

Delicious in flavor and crisp in texture, it tempts disinterested appetites.

In addition to supplying natural bulk and arousing keener interest in food, Post's Bran Flakes yields such essential food elements as iron, phosphorus, proteins, carbohydrates and vitamin-B.

Postum Company, Inc.
Dept. B-2938, Battle Creek, Mich.

We shall be glad to send to any physician or nurse a sample of Post's Bran Flakes, and samples of other Post Health Products, which include Post's Bran Chocolate, Grape-Nuts, Post Toasties and Instant Postum. If you live in Canada, address Canadian Postum Company, Ltd., 812 Metropolitan Building, Toronto 2, Ontario.

POST'S BRAN FLAKES

WITH OTHER PARTS OF WHEAT

as an ounce (Post Health Products) *of prevention*

© 1928, P. Co., Inc.

A bequest of $5,000 from the Courtlandt Linkroum estate, and a gift of $5,000 from the estate of Dr. George Howard McFadden, have been announced by the governors of the Hackensack Hospital, Hackensack.

New York

St. Luke's Hospital, New York, has recently completed a convalescent building at Greenwich, Conn. The new unit, which was the gift of Mrs. Hicks Arnold, was erected at a cost of $500,000 and has a capacity of eighty beds.

Mrs. J. L. Given has donated to the Memorial Hospital, New York, the sum of $5,000 for clinical research on the causes of some of the major forms of cancer.

The Workmen's Circle Sanitarium has recently completed a new pavilion at Liberty, at a cost of $165,000. The new pavilion contains all modern features. Dr. J. F. Fish is the director.

A new maternity pavilion is under construction at the Jones Memorial Hospital, Wellsville, $25,000 having been contributed to the hospital for this purpose by Mrs. B. C. Fuller.

The trustees of the estate of the late Ruleman Muller, New York, are to select a beneficiary for a residuary bequest of $250,000 for a hospital or hospitals treating indigent cancer patients.

Reconstruction Hospital, New York, is to receive a sum of $50,000 under the terms of the will of the late Dr. William P. Thompson, emeritus professor of medicine at Cornell University Medical College.

Long Island College Hospital, New York, has received a gift of $100,000 for the Hoagland Laboratory, by the will of the late Ella J. Hoagland, daughter of the founder, Dr. Cornelius N. Hoagland.

The will of the late Ormsby M. Mitchell provides a sum of $20,000 to be given to the United Hospital, Port Chester.

The Lying-In Hospital, New York, is to receive one-fourth of a $706,704 trust fund provided by the will of the late Louis V. Bell.

North Carolina

Construction is under way on a new fire-resistant building for the Babies' Hospital, Wrightsville Sound. The new hospital will have a capacity of forty beds and will be completed this spring.

Ohio

Contracts have been awarded and construction is under way on the new Toledo Hospital, Toledo, to be erected at an estimated cost of two million dollars.

The building fund campaign for Christ Hospital, Cincinnati, has received a gift of $500,000 from James N. Gamble of that city.

Oklahoma

The two upper floors of St. John's Hospital, Tulsa, are to be completed and placed in use immediately. They will contain the operating, sterilizing and laboratory rooms, diet kitchen and physicians' dressing rooms, as well as additional patient beds. The first four floors of the institution were completed two years ago.

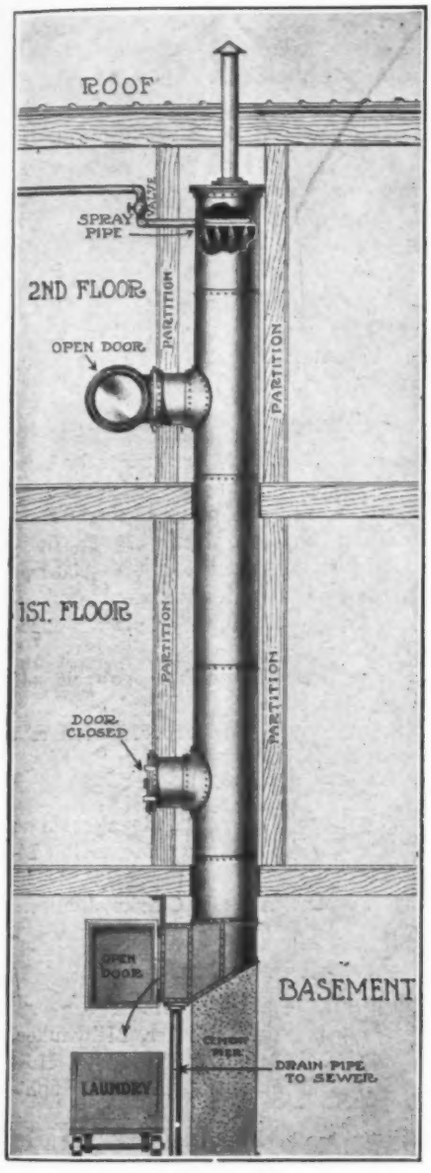
A hospital for crippled children is being constructed in Oklahoma City, near the University Hospital, at a cost of $300,000.

Oregon

Mercy Hospital, Eugene, has been purchased by the International Bible Mission from the Sisters of Mercy, and will be consolidated with the Pacific Christian Hospital in the same city. The two institutions will be adminis-

HASLETT CHUTES FOR

SOILED LINEN INVENTED BY C. M. WILKINSON



Every hospital manager or architect of experience knows that any sizeable institution should have a Soiled Linen Chute. There is absolutely no argument about that.

But how should it be built? That is another question. We have spent years in perfecting the aluminum Linen Chute invented by C. M. Wilkinson and have proved its superiority by reason of its distinctive features.

The horizontal joints in the stack are lapped and riveted. There is therefore no crack into which pollution can seep. When the water is turned into the spray ring in the top, it flows down an unobstructed surface and washes it clean.

We were told that aluminum could not be welded. Nevertheless we are welding it perfectly, and our intakes meet the stack in a smooth joint on which linen cannot tear. Cleanliness and beauty are psychologically important in hospitals and our intake doors are of polished aluminum with glass fronts that excite admiration. The bottom of the chute rests on a thick steel plate forming the top of a heavy steel pedestal that will resist any shock.

There is nothing in the chute to rust, chip or crack. Instruments thrown in by accident will not injure it. It is designed to last as long as the building. See that a Haslett Aluminum Soiled Linen Chute has a place in your next building programme. It will prove a permanent help in efficient management.

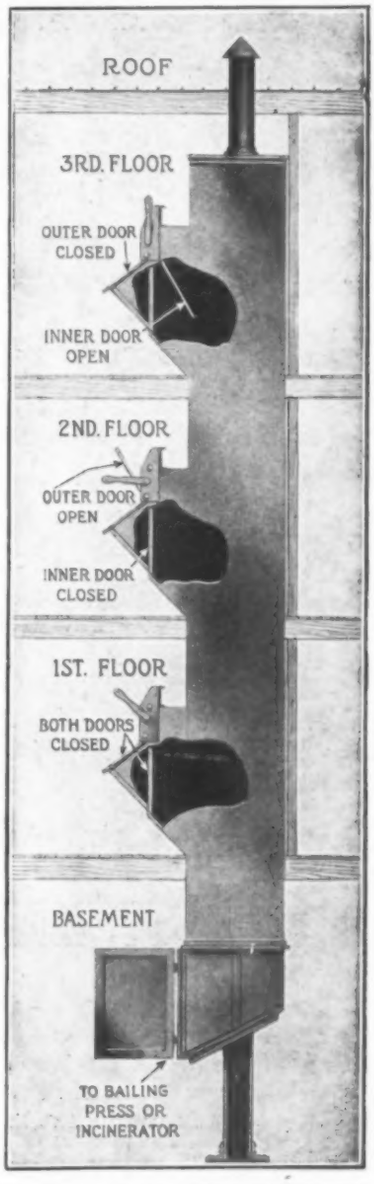
RUBBISH INVENTED BY GAIL D. BEAVER

The waste-can no longer deserves a place in the modern hospital. It occupies valuable space, requires trucking and clutters the service elevator. Also it may be in the incinerator room when wanted upstairs.

The Haslett Rubbish Chute fits into a small space, is always there when wanted, puts no labor on porter or elevator and can't be left uncovered.

This last idea is particularly important. Faded flowers and their wrappings, cigarette stubbs, absorbent cotton and sweepings ought to be removed frequently and effectively. The Haslett double door intake is so arranged that you put dust into the chute without having any blown back by draught. The doors open alternately. They cannot both be even partly open at the same time.

Rubbish may accumulate in the bottom and periodically be sorted out for salvage before being destroyed. This chute is made of steel, strongly and rigidly constructed, yet designed in accordance with the best shop practice so that it is produced at moderate cost.



Let us mail you a list of our Chute users. Prominent are:

West Suburban Hospital, Chicago
St. Anthony's, Dodge City, Kans.
Montreal General, Montreal, Can.
Royal Victoria, Montreal, Can.
King's Daughters', Greenville, Miss.
Wyoming General, Rock Springs, Wyo.
Methodist, Hattiesburg, Miss.
State Hospital, Dix Hill, Raleigh, N. C.
St. Joseph's, Fort Worth, Texas
Charity Hospital, Shreveport, La.
Cirugia, San Juan, Porto Rico

St. Joseph's, Hot Springs, Ark.
Charity Hospital, New Orleans, La.
Battle Creek Sanitarium, Battle Creek
Polyclinic, Harrisburg, Pa.
Gallinger Municipal, Washington, D. C.
Johns Hopkins, Baltimore
City Hospital, Newark, N. J.
Cleveland City, Cleveland
Pittsburgh Hosp., Pittsburgh
Mt. Sinai, New York City
Boston City, Boston

Hosp. for Insane, Ayla, N. J.
St. Joseph's, Memphis, Tenn.
Lamar County, Paris, Texas
St. Luke's, Duluth, Minn.
Sydenham, New York
Contagious, Highland Park, Mich.
Western Penna., Pittsburgh, Pa.
Beth Israel, Newark, N. J.
Sacred Heart, Eau Claire, Wis.
Hosp. for Insane, Northampton, Mass.
Reading Hosp., Reading, Pa.

St. Vincent's, Toledo, Ohio
St. Joseph's, Louisville, Ky.
Rochester Homeo., Rochester, N. Y.
U. S. Veterans', Sawtelle, Calif.
Yale Medical School, New Haven, Conn.
Children's, Philadelphia
West Jersey Homeopathic, Camden, N. J.
St. Francis, Santa Barbara, Calif.
Wilkes Barre General, Wilkes Barre, Pa.
St. Vincent's, Jacksonville, Fla.
Bethesda, Cincinnati, Ohio

HASLETT CHUTE & CONVEYOR CO.

Main Office and Works, OAKS, PA.

Branch Offices at:

620 State Theatre Bldg., Pittsburgh, Pa.
17 East 42d Street, New York, N. Y.
367 Shrine Building, Memphis, Tenn.
Little Building, Boston, Mass.
523 Calvert Bldg., Baltimore, Md.
60 California St., San Francisco, Calif.
811 Harrison Bldg., Philadelphia, Pa.
2594 University Ave., St. Paul, Minn.
1300 Young Street, Dallas, Texas
Union Mortgage Bldg., Cleveland, Ohio
470 E. Third St., Los Angeles, Calif.
185 W. Monroe St. Chicago, Ill.
927 Century Bldg., St. Louis, Mo.
305 New Birks Bldg., Montreal, Can.

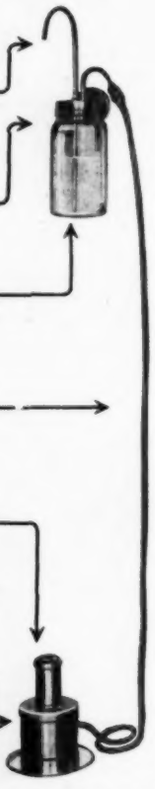
For complete index of advertisements refer to the Classified Directory

The New

SEPTISOL

Dispenser

for SEPTISOL Surgical Soap



The absence of any valves or parts on the dispenser insures long satisfaction and steady service. The dispensing tube is adjustable to any position.

The Septisol Dispenser is easily attached to any wall.

The soap container is glass . . . holds one quart of soap—handy to fill.

The flexible metal tube permits foot plunger to be moved at will.

Slight pressure gives the correct amount of soap . . . simple but positive in operation . . . pneumatic pressure does the work.

The foot plunger is portable . . . offers no interference in cleaning or mopping. This entire unit is neat and compact . . . nothing clumsy or bulky in the way or to interfere while washing.

These Dispensers are licensed, without cost, to users of Septisol Surgical Soap, the pleasing, efficient and highly concentrated soap for surgeons. It is economical, too . . . one gallon of Septisol can be diluted with one to four gallons of water.

PROTECTION

This new soap dispensing device protects the surgeon against possibility of infection, as is possible in exposed soap trays or receptacles. Its important advantages . . . to your hospital . . . will warrant your taking the time to investigate.

Write for full particulars

Vestal Chemical Co.

St. Louis, Mo., U. S. A.

tered by the same staff and will be served by the same nursing school. They will be known as the Pacific Christian Hospital on Hilyard Street and the Pacific Christian Hospital on College Hill and will have a combined capacity of 162 beds.

Pennsylvania

A sum of $75,000 for the erection of a memorial maternity wing, has been given to the Jewish Hospital Association, Philadelphia, through the will of the late Charles C. Shoyer.

Contracts have been awarded for three new buildings, to include a five story out-patient pavilion, for the Mount Sinai Hospital, Philadelphia. The cost of the additions is $1,250,000.

Tennessee

A joint city and county bond issue of $250,000 has been authorized for the erection of a hospital for children in Chattanooga. It will be a hospital for all children, colored as well as white, and will care for all cases, including contagious, according to the present plans.

Texas

The new Methodist Hospital, Dallas, has recently been completed and dedicated. The building was started four years ago but because of inability to secure the required funds construction was held up several times. The hospital was finally completed at a total cost of $800,000 and contains out-patient department, children's floor, maternity floor and complete equipment for the proper functioning of a general hospital.

The new Knox County Hospital, with a capacity of thirty-five beds, has recently been opened in Knox City. It is of fireproof construction and was erected at a cost of $60,000.

Washington

St. Luke's Hospital, Spokane, has set aside a room to be known as the Arthur Clarke Johnson Memorial Library. This is in acknowledgment of the gift of the medical library of the late Dr. Arthur Clarke Johnson, donated by his widow.

Wisconsin

Three Milwaukee hospitals were recipients of bequests from the will of the late Charles F. Pfister, Milwaukee. They are Misericordia Hospital, $10,000; St. Mary's Hospital, $10,000 and the Franciscan Sisters of St. Joseph's Hospital, $2,500.

Announcement has been made of the consolidation of the Shorewood Hospital and the Riverside Sanitarium, both of Milwaukee, under the name of the Shorewood Hospital-Sanitarium. The combined institutions will care for all forms of medical cases.

Canada

Victoria Hospital, Winnipeg, Manitoba, has acquired a building on property adjacent to the hospital which will be renovated and used as a nurses' home. It has been connected with the hospital by a tunnel and when it is ready for occupancy it will release the sixth floor of the hospital for use as a public ward.

Foreign

A large new hospital, completely equipped with all modern appliances, has been erected in Prague, Czechoslovakia, by the Brothers of Mercy. The new institution is for the care and treatment of the poor and abandoned sick in Prague. Similar institutions are operated by the Brothers in that country.